/136 cont./

142 The tribe at Gam in particular consists almost exclusively of comparatively large people who, even after a thorough washing, display a decidedly darker coloration than the other Auin.

162 According to my observations, there is something like one to two women for each man, and from two to three children for each woman.

162 847 [862] In this connection I would like to mention that newborn children are always killed if the mother is still nursing a child, which continues until about the third year of life. The killing is done immediately after birth by the mother, who buries the newborn child alive. The father has nothing to do with it. Since marital [853] intercourse continues during the nursing period and since this period lasts for about three years, it follows that approximately every third child is reared while those born in the meantime are killed without exception. This might well be a principal factor in the unquestionable decline in the population.

592 595 Since each woman has her special windscreen (hut), the man lives alternately with one and then another of his wives; the latter in turn have their children living with them, and it therefore follows that about three to four persons occupy each hut.

221 361 The size of the settlements (villages) is quite indefinite and changes according to the circumstances. During the dry season a settlement is formed usually by one to two families, whereas during the period of ample veld food, in other words, toward the end and shortly after /137/ [map appears here] /138/ the rainy season, sometimes up to 30 families join together to form a "village." In April, 1908, about 400 men were living in a settlement near Sidonitzaub. If their dependents are included, one will arrive at a figure of at least 1,000 persons.

[701] All the men are armed warriors.

161 As has already been noted, one can clearly observe a decrease in the population, which, judging by its rapid progress, can be designated as swiftly approaching extinction. Aside from infanti- ●[136] cide and malaria, the decrease of wild game may also be given as a reason for the population decline, since this decrease makes food more difficult to obtain. Older Auin state that in former times attacks by lions caused heavy losses.

[Text continues on page 7]

[6 cont.]

101 account refers only to the latter.

821 [7] The sky is designated by them as !nanu áiba Éroba Kharésa ("rain house of god").

776 For god they have the expressions "Erob" and "χ'amab."
775 only "Erob" is used in prayers. χ'amab (1) has been preserved

1. χ indicates a very low gutteral click, for which I know of no notation.

in χ'amá //gu Khe = "people who are with god," in other words, the souls of the deceased in heaven. Everyone goes there, the good as well as the bad. Erob has no wife and no children. A human being has only one soul (!gau-ba). This soul goes to the heavenly house and remains there "until Erob makes new people from it." Here is a belief in the transmigration of souls, which, it must be admitted, is not thought through any further.

No spirits of the dead remain on earth. There are little
776 bush spirits, the gangorob; they are harmless and do nothing. There are no evil little spirits. They supposedly know nothing about Heiseb and /Nawa.

● 136 The supply of game is ample in the tall dry forests of the Otjimpolo Veld. There are also fish in the rainy season. The
[825] Bushmen call them "shiba" (Ovambo: oshi or ochi); in other words, originally they had no word for them.

224 The Bushmen are helpless against the lion (χ'oréba).
[825] They leave a region as soon as lions make it unsafe. "There is no point in hunting them."

The leopard (χ'nába) is hunted with dogs (ariba). The
[439] chiefs of Amboland pay a good price for the skin, since little princes and princesses are not carried in a litter made of cowhide, but in a leopard skin. The jackal (≠Khai-eba) and the Löffelhund (//arúba) [a fox-like wild dog of the subfamily Octocyoninae] are hunted with enthusiasm. "Aruba" probably corresponds to N. //arob = striped jackal.

Wild dogs, "khere," !nube (N. !goub) are preferably
[825] avoided. No notice is taken of the hyena, ≠Khai-lasa (N. ≠heirab),
[262] and it is not eaten. When they come near the camp, it is not a
[787] good sign.

[7 cont.]

222 The honey badger, !uisa (N. !ous), which leads to the
825 bees, is followed ever so eagerly.

The common wild pig (gariba), the kudu (daub), the
224 gemsbok ǂ'uaba (N. /gaib), and all the small antelopes are hunted. Pits are no longer known, although they used to dig them in former times.

If they decide to go hunting, sexual intercourse must be
[534] avoided the night before. In the evening the hunters go into the forest and spend the night there. Before dawn they rise and pray:

[539] Pu, pu, Eró, /nari dsu /ari mate — God, tomorrow early we receive.

When a piece of game has been killed, one of the hunters cuts a piece of flesh from the animal's body and hands it to the leader of the hunt. This meat is called am-shái-khe. A fire is made, and this piece is placed on it. When it is roasted, the leader cuts off a piece and shouts:

[539] Ero, Ero, Ero, ha gore, ha gore — Erob, Erob, Erob, eat, eat
i Khe Khandi ô — With us flesh.

After a pause:

ha lĕ a lĕ ha góre o Khandi ô — Come! Come! Let us eat flesh.

Now the roasted flesh is consumed. Nothing is thrown away or left behind for Erob.

Then the game is cut up, and everyone goes home with his portion.

136 Snakes are not rare, although they are by no means as common as in the stony regions of the southwest.

The boa constrictor eats human beings; if it catches a Bushman, it starts to consume him at the legs!

132 In spite of the timber forest, the danger of drought is
821 great. Erob sends rain. When there is a drought, the Bushmen
731 dance and pray:

[539] Ero, Ero, Ero, /ga !goro — Erob, Erob, Erob, we are dying of thirst
/ga-wi -ma ta re — Water give us.

177 [8] It is very interesting to observe how in these certainly
776 very ancient hunting and rain prayers the former old heathen gods'
782 names Huwe and ǂ'amab were replaced by the Christian "Ellob."

I asked the people whether they knew any other prayers and received the following answer: "We know very well that

[17 cont.]

144 obvious, and the southern Bushman race, that is, the one that displays the characteristics generally ascribed to the Bushmen as a whole, is found to be pure only to a modest degree which in-
137 creases toward the south. In the north, the !Kung Bushmen are
184 decidedly forest people, whereas in the Sand Veld they inhabit the shadeless low bush. The surface of the region consists of
134 areas of whitish sand, red toward the east and north, which is
137 streaked with strips of surface chalk. Along the Omuramba Omatako and parallel to it there are pseudo-dunes running north-northeast -- south-southwest and covered with dense thorn bushes. On the more clayey soils in the vicinity of the Omurambas [perhaps a local term for "rivers"] there is denser tropical dry forest. A reminder of more humid times is provided by three or four giant baobab trees that are dying.

Ludwig Zukowsky (1) reports on the fauna and flora:

[113]

> 1. "Beitrag zur Kenntnis der Säugetiere Deutschsüdwestafrikas [Contribution to the Knowledge of the Mammals of German Southwest Africa]," Archiv für Naturgeschichte, Vol. 90, No. 1, Part A, 1924.

137 "The Kung Veldt, a large deciduous broad-leaf forest
[136] region, bounded in the north by the Okovanggo, in the east by this river's flood area, in the south by the Dusche and Schadum, and in the west by the lower course of the Omuramba u'Omatako, is regarded by J.H. Wilhelm as a special faunal region, since here the most striking representatives of the Sand Veld, oryx, oribi, bubalis, guevei [blue duiker], and canis are absent and in their place new forms appear, such as damaliscus, schaeffia [?], and hippotragus. Red sand dominates the entire region, which is covered with sereng [Burkea africana], red bean trees [Copaifera coleosperma], mokussi (Baikiaca plurijuga), yellowwood [Terminalia sericea], dolf [Therocarpus erinaceus], and wild orange trees (Strychnos schumanniana). During the rainy season, when the trees are covered with leaves, the deciduous forest that covers the entire region remotely resembles a younger German beech forest. The chief tree is the sereng (Burkea africana) with its accompanying tree, the mokussi

[18 cont.]

134 The ground is covered with red sand (fox sand), which in the thorn bush areas changes to a firm, grayish-yellow; perhaps argillaceous sand. Chalk cliffs and other rocks are completely lacking. The Kaudum bed is perpetually covered with dense green grass. The sand pans have humous sand; only in the northeast near Schamatura is a peat-like swampy soil to be found with red, strongly ferruginous water. Forest fires are the order of the day, but they do little damage to the tree growth."

133 134 South of the Omuramba u Owambo there is a fairly large number of limestone pans, which in part still contain water but are mostly dried up. The land there is drying up rapidly, according to both the Bushmen and the Europeans. During the rainy season the clayey soils are swampy, and at that time the [136] [164] dense bush forest is filled with myriads of mosquitoes, and malaria claims its victims from all races. The unhealthy situation, the difficulty of getting workers, and the irregularity of 648 the rainfall have led to the abandonment of most of the farms outside Grootfontein, so that the Bushmen have actually gained ground there. The !Kung Bushmen outside the police zone live entirely according to their old customs and traditions. The in- [578] [619] dividual kin groups are in part hostile to one another. A kind of hereditary feud exists with the Hei//om, who are often attacked because of the women. The !Kung live on good terms with the farms along the northern boundary (Duwib, Keitsas, Keibeb, Kuntsas, Neitsas, Foxhof). Many of them work there for [464] certain periods of time, and quite a few permanently; in particular, they like to let women and children work on the farms. [177] [439] Mr. Cleark, the owner of Keibeb, has trained a large number of them to make charcoal. These Bushmen make the charcoal out in the wilderness and deliver it. It is then resold to the mottramite mine in Abenab. Until the establishment of the police zone, a perpetual state of war existed between the police and the Bushmen. There are constant battles between the Herero of Otjituo and the !Kung because of livestock thefts. The Herero attack the Bushmen on horseback and kill them from the saddle with the kirri.

The Bushmen, who are not accustomed to shooting at rapidly moving targets, usually come out the losers. Like the

[32 cont.]

224 423 go to the kin group to whom this territory belongs and take the men to the animal. Then it will be carefully divided down the middle; the hunter gets one half, and the owners get the other half. Nevertheless, quarrels are common, because there is only one of certain organs, such as the heart, liver, etc. These con- [184] ditions, however, exist only among the eastern !Kung. A Hei//om or a northern !Kung who is found hunting in the territory 224 of another tribe is regarded as an enemy. Boys' hunting is con- [857] fined to lizards, tree rats, and other rodents. They ordinarily [411] use the bird arrow, which is carved out of a piece of wood, but in contrast to the Ovambo, the older boys here already have [223] poisoned arrows. Young and old pursue the hunting of birds with great enthusiasm; in particular guinea fowl, sand hens, grouse, and the Pau [?] insofar as it occurs in this region. These fowl [262] and small bushbucks are the chief sources of the meat in the native diet. The forest region of the eastern !Kung is poor in [136] large game. Zebras are almost entirely absent, as is the wildebeest; the giraffe is very rare. The eland, kudu, hartebeest, and especially the gemsbok are relatively more common. Hunting drives are organized to hunt the elephant or rhinoceros. First, the elephant is separated from the herd. As soon as it has been cornered, one Bushman after another springs forward and throws his spear. It is also possible to hunt the elephant with poisoned arrows; there is a number of thinner spots in the skin at the front legs, and the marksman places as many arrows there as possible. The elephant does not die; it merely becomes sick. The hunter rushes home to get some other men, who then go to look for the elephant with spears. Pitfalls are made in the vicinity of the watering places, and a pointed pole is placed inside them. The Bushmen along the Okovanggo also hunt the hippopotamus with pitfalls. The eastern !Kung maintain that in ancient times the hippopotamus was also found in their land. The sling trap is made [223] in various sizes. The ostrich in particular is usually caught in such sling traps, which are provided with a piece of bone bleached by the sun. Small cats and the like are also caught with this trap. It is likewise placed on the trails of the bushbuck. Jackals and the like are caught by lying in wait for them as they come out of their dens and then beating them to death with the kirri.

[33 cont.]

224 has done the shooting must go home immediately and may not speak, eat, or drink, for if the hunter speaks with others, the kudu will not be found for a long time, and if he drinks water, the poison will become watery and will not be effective, and if he eats, the kudu will remain quiet and the poison will not work effectively. The next morning very early we must set out on the trail. The kudu is already dead. The people carry the meat home. [782] Then it is put on the socha [sacred] fire. The //Gauab must be given some of the meat. Whoever does not do this will be punished by the //Gauab with serious illness, and the people will say: 'That is just. The //Gauab has given him the game, why does he give nothing for //Gauab?'" Here, therefore, a true primitial offering is involved.

It is interesting that the Ogowe bury arrows in the sand at various watering places, with the poisoned tip pointing upward; they do this in shady spots that game animals like to use as resting [202] places, and by certain signs, such as tying together blades of tall grass and the like, they set up warnings (Von Zastrow and Vedder).

When a Bushman horde of today is able to hunt down half a dozen large antelopes in a year, it can consider itself lucky.

The porcupine is also commonly hunted, as are the scaly anteater and the fat aardvark, which is very common but difficult to catch. Monkeys are very rare; on the other hand, tree rats make a desirable addition to the diet. The ostrich is not uncommon in open terrain, and ostrich eggs are greatly coveted. Occasionally a boa constrictor, which tastes like a fat fish, or an iguana may round out the menu.

●136 Among the animals which are in any way dangerous to human beings, the lion should be mentioned in particular. They occur in great numbers, but rarely stay in one place for a long [165] period of time. A considerable number of Bushmen become their 262 victims, especially in the north. Lions, leopards, hyenas, and jackals are neither hunted nor eaten; the same is true concerning [753] birds of prey. Eating leopard meat produces fever and eczema, [825] while eating the flesh of birds of prey produces temporary blindness and symptoms of sickness similar to acute sausage poisoning.

Poisonous snakes are not eaten; they are much rarer here than in the stony regions of the central and southern areas, and they do not constitute a noteworthy danger.

[33 cont.]

●136 Among the dangerous insects, the anopheles mosquito naturally comes first. It is present in enormous numbers during the [34] rainy season. In some places, small reddish-brown ticks are common. The Glossina [tsetse fly] seems to be absent; I encountered them only in the Kunene swamps. Among human parasites, bugs and fleas are practically unknown; on the other hand, lice are extraordinarily common, without being especially noticed by their owners.

9. The Water Supply

312 During the dry season, the water supply plays a decisive role. Every Bushman carries in his quiver the two reed tubes for the so-called Bushman well. It is by no means true, however, that the Bushmen are able to obtain water in this way at any time and place. It is only in places where some dampness is still visible [Fig. 1 appears here] that the earth is loosened with a digging stick, and then the reed, which, by inserting the parts into each other, may be over a meter long, is sunk into the ground. As the accompanying figure shows, the Bushman does not keep the drainage reed and the sucking reed in his mouth simultaneously. The representations which suggest this might well be completely false; instead, the Bushman has the sucking reed in the right-hand corner of his mouth, and as soon as he has his mouth full of water he lets it flow into the closed hollow of his left hand in which the drainage reed is placed. The water gained in this way is of course thoroughly mixed with saliva. It cannot be kept for any length of time.

312 824 Water reservoirs are also provided by the few baobab trees, which contain puddles of water in their interiors. An artful method is used in the Sand Veld. A palm tree is drilled halfway up its trunk; then the palm pith is scraped out as far as possible, and the opening is carefully sealed. The water rising from the roots gathers in this hollow and has a good taste.

Among the thirst-quenching roots, that of a liana (!gŏa) was named in particular.

7:Story N-5 (1955) 1958 FX10 Bushmen FX10

INTRODUCTION.

Early in 1955 the Chief of the Union Government Division of Botany received a request through the British Museum for a botanist to accompany the Harvard-Smithsonian-Peabody expedition, which in the winter of that year was to make a study of the Bushmen of the Bechuanaland Protectorate and South West Africa. The duties of the botanist would be to investigate and report upon the plants used by the Bushmen in obtaining food and drink, and this task was assigned to me in my capacity as one of the Botanical Survey Officers of the Division of Botany. 121

I joined the expedition on 10th June at Molepolole, after it had been some weeks in the field, and we thereafter travelled along the route shown on the map, reaching Windhoek on 2nd September. 122

There were two main areas of study, one in the country south of Ghanzi and the other north of Ghanzi. The southern area, part of the Kalahari Desert, was remarkably uniform in every way. The surface was deep loose sand, gently undulating and with occasional shallow depressions of firm dark soil known as pans, which collect a little water after rain. We did not see a hill after leaving Molepolole until the Ghanzi area was reached, nor a stone, except for shelves of limestone in some of the pans. There was no permanent water in the 300 miles between Kudumalapshwe and the Ghanzi farms, but Khungwane waterhole and Khomodimo Pan had not yet dried up. Khungwane held one or two thousand gallons and Khomodimo contained a pond about thirty yards across and a foot or so deep. It provided a home, rather unexpectedly, for a coot (*Fulica cristata*) and a water-scorpion (one of the *Nepidae*). There are no records of the central Kalahari rainfall, but it would be between 18·5 and 19·6 inches, which are the mean annual figures for Ghanzi and Molepolole respectively. In spite of this low rainfall, and although we were there in the dry season, we found that the sand a few inches below the surface and down to at least three feet was damp enough to retain its form when squeezed in the hand. One specimen of a species of Breviceps was found in the sand, a small burrowing frog which does not swim or jump and which passes through its tadpole stage in a mass of frothy material which surrounds the eggs. The commonest animals were the rodents whose burrows and tracks were in thousands along our route. The game included gemsbok, springbok, hartebees, eland, blue wildebees, giraffe and smaller antelopes and hares. Of the carnivora, lions, leopards, wild dogs, jackals and hyaenas were present. Ostriches and bustards were seen and occasional small birds of various species, but birds were on the whole poorly represented. The vegetation was mainly grassland, usually about four feet tall and mixed with many shrubs a little taller. Trees were seldom absent for more than a few miles at a stretch, and were scattered to form a parkland or in belts thick enough to hamper the progress of our lorries through them. 133 [134] [312] [136] [132] 136 137X

The northern area was much more varied, with the undulations sometimes forming distinct rises and dales. Hills, however, were still absent, although there were occasional outcrops of limestone and other rock. The soils were for the most part fairly firm, but sandy nevertheless, and damp below the surface. From time to time we crossed zones of purer loose sand, slightly raised above the surrounding country and known as dunes. A number of permanent waterholes, groups of large pans and a rainfall estimated to be about 20 inches a year (Department of Transport 1953) made this area better watered than the Kalahari, and better wooded. 133 [134] [132] 137X

X137 There were more species of grass, and, particularly on the dunes, more of
136 trees and shrubs. The fauna was also richer for there were buffalo and elephant and many waterfowl in addition to the animals found in the Kalahari.

197 The Bushman languages represented in this paper are classified
[128] according to Bleek's *Comparative Vocabularies of Bushman Languages* (1929). They are !h3:, the closely interrelated ǁganakwe, ǀgikwe and Naron, and Auen (see also Bleek, 1928: 60-64).

!h3: is a member of the southern group, in which the lip click is
[194] found, and a dialect of what Bleek calls ǀnuǁen, S6 in her system of classification. Bleek's spelling is !k3:, but I heard the click aspirated. It is spoken in the neighbourhood of Lehututu, which is 150 miles south of Ghanzi.

ǁganakwe is spoken to the east of Ghanzi, and has been studied by Maingard (1957).

The centre of the ǀgikwe language appears to be in the country to the south-east of Ghanzi. It is a member of Bleek's Central group, closely allied to Naron and easily understood by Naron speakers although many
[194] words are different. A curious feature of the phonetics is the occurrence of the ejective lateral explosive followed immediately by the velar glottal affricate (see Cole, 1955: 23 and Beach 1938: 222-223). The first sound is not mentioned in any papers that I have seen on the Bushman languages.

[114] Naron is Bleek's C2. There is an error which is liable to confuse one on page 3 of her publication, where the languages of the Naron and Masarwa of Tati have been transposed. Naron should be under C2 and the Masarwa language under C1. A grammatical sketch of Naron is given in Bleek's paper of 1928.

Auen, Bleek's N1, is the eastern form of the !khũ linguistic group and is spoken round Gautscha Pan. It was studied by Maingard when he was a member of this same expedition and an account of it is given in his paper of 1957. In this paper I refer to it as Eastern !khũ.

124 The work done in the Kalahari was done through interpreters, and much of that in the northern area likewise, except towards the end of the expedition when through closer contact with the Bushmen for a longer time than in the south, I was able to acquire a smattering of the Eastern !khũ language, enough to ask straightforward questions and to understand straightforward replies. The phonetics of the Bushman languages are a study in themselves, and I do not claim that my spellings and indications
104 of the tones are exact. In the orthography I have followed Bleek (1929)
194 with the following exceptions:—

1. I have placed the n first when it is combined with a click. It has been the convention to place the n after the click in the written Khoisan languages, the argument being that the n and the click are pronounced simultaneously (Meinhof, 1909: 5). To my ear the n is the first sound in the combination.
2. Bleek does not mention the voiced h, which sometimes follows a nasalised click. I have accordingly followed Doke (1936: 448) and used the symbol ɦ.

For easy reference, the symbols I have used are listed at the end of this introductory chapter.

7:Story N-5 (1955) 1958 FX10 Bushmen FX10

[262] 411 824 It furnishes the Bushmen not only with an edible gum, but also with the material for making quivers. These are made from the lateral roots, which are a foot or so below the surface. A suitably straight length is exposed and cut through, and after the cortex has been loosened by gently pounding it, it may be slipped off the woody central portion. The tube so obtained is then covered at one end with skin. The roots of this tree, like those of *Acacia giraffae*, have a most unpleasant smell when cut, something which is not apparent in the above-ground parts.

X137 ***Burkea africana*** **Hook. (5332) Photograph 18.**

Eastern Ikhū Bushman -ǂk'u

An evergreen tree, with attractive drooping grayish compound leaves which are silvery when young. The tips of the youngest twigs are covered with a dense reddish pubescence, but this soon wears off and the older branches and the stem have a dark brown rough bark. The flowers are small but massed in showy hanging spikes six inches long and as thick as a pencil. They are cream-coloured and scented, and produce flat one-seeded or two-seeded pods two inches long. In the Transvaal the tree has a spreading crown. Beyond Tsau the habit was very different—the branches were ascending and shorter and gave the tree a slender appearance almost like a Lombardy poplar.

It is a widespread species in tropical Africa, extending from the Magaliesberg northwards to Abyssinia and Nigeria (Codd, 1951:61). Along the route of the expedition it was scattered from the south up to a point 171 miles from Molepolole, after which it was not seen again until 65 miles north-west of Tsau. It was found only on heavy sand, and beyond Tsau where sand and hard soil sometimes alternated at intervals of a mile or so the corresponding zones of Burkea were sharply defined. The central gap in its distribution is probably a climatic one, for there was deep sand in this area and conditions were apparently ide[illegible] for Burkea.

● 136 262 Burkea occasionally produces a little edible gum from injuries, but it is more important indirectly because of being the host of at least two edible caterpillars, one being the larva of the moth *Nudaurelia bellina* Westwood. This caterpillar is in length and thickness slightly bigger than one's little finger. It is marked with black dots on a yellowish-green ground, with a black transverse band just below each segment and a row of stiff black bristles on each segment. It is recorded from South West Africa and is no doubt known to the Bushmen and eaten by them, but as the expedition passed through those parts too early in the season no specimens of the caterpillar were seen. The Bushmen did bring in the pupae of what they said was an edible caterpillar, and Mr. L. Vari of the Transvaal Museum was unable to distinguish them from the pupae of *Nudaurelia bellina*. One cannot, however, assume from this that they are in fact the same, for the pupae of different species in this group may be indistinguishable.

136 Another caterpillar found on Burkea and recorded also from South West Africa is the larva of the moth *Cirina forda* Westwood. It is black below and silvery or golden yellow above, with a line of black markings down the centre of the back. It is sparsely covered with long white hairs. Many other species of caterpillars have similar hairs which are extremely irritant, but these are quite harmless.

7:Story N-5 (1955) 1958 FX10 Bushmen FX10

137X

Adansonia digitata L. Photograph 32.

Eastern !khũ Bushman ≠m

The Baobab, as it is commonly called, is shown in photograph 32. Its stem may have a circumference of up to 148 feet, and makes it quite unmistakable. In winter it is leafless but in summer it bears dense dark-green foliage. The flowers are pure white and up to six inches across, and the fruits, as described by Codd (1951: 120) are "oblong or egg-shaped, five to six inches or more in length and three to four inches in diameter, with a woody shell which is softly grey-velvety on the outside".

The southernmost specimens were seen in the neighbourhood of Ghanzi, and from there it occurred sporadically to Gautscha Pan, the furthest point north reached by the expedition. There were big gaps in its distribution and it was rare throughout, but in some parts of the Transvaal it occurs abundantly and may have an unbroken distribution over many square miles of country. It is widely distributed in the drier regions of north and south tropical Africa.

252 262 [272]

Inside the shell of the fruit is a white, pith-like substance which may be eaten raw, or ground up and stirred into water to make a drink, or boiled to make a porridge. It has an acid-sweet taste. The seeds which are embedded in the flesh are also edible and are eaten like nuts. In other parts of Africa they are prepared in a somewhat involved way which includes protracted boiling, fermenting and drying. There are several records of the fact that the young leaves make quite a good substitute for spinach, but as the expedition was during the winter and as the trees are deciduous, I cannot say whether the Bushmen know of this, nor whether the trees we saw were of the glabrous variety which is the one used for spinach. No seedlings were seen. It is known that the white shoot from the germinating seed can be used as a substitute for asparagus, and that the tender root of the very young Baobab is also edible (Dalziel, 1937: 113). The trees are often hollow, and like *Boscia albitrunca* and *Ricinodendron rautenii* may act as reservoirs for rain water which can be used in times of scarcity. The Bushmen reach it by fitting hollow grass stalks end to end to form a tube, and sucking it out. A further product of the Baobab is a large caterpillar which feeds upon the leaves and which is an important article of food aming the Natives of the northern Transvaal. It is recorded also from South West Africa, and is very likely known to and used by the Bushmen.

271 312 824 262 136 825

137X

Ochna pulchra Hook. (5273) Photograph 33.

Eastern !khũ Bushman ǂi and ǂe:i

A semi-deciduous tree with a clean but usually rather twisted bole which is white to light gray and has a peeling bark. The branches are bent and rigid and the wood brittle. They bear glossy light green alternate leaves which are almost sessile and usually entire, rarely with a very finely toothed margin. The tree has an attractive appearance even in winter, and the young leaves add to this in the spring for they range from pale green to reddish-brown. The flowers are borne in early summer, in showy scented bunches. They have yellow petals and a green calyx, which persists after the petals have fallen and turns bright red. The fruits are hard and green when immature but turn fleshy and black as they ripen. There are usually two or three, the size and shape of small beans, attached to a fleshy red swelling in the centre of the flower. The leaves have been suspected of causing poisoning in stock, but tests carried out on mammals have so far been inconclusive. (Uys and Thomas 1952, Steyn, 1949: 125.)

7:Story N-5 (1955) 1958 FX10 Bushmen FX10

X137 *Coccinia sessilifolia* (Sond.) Cogn. (5167) Photograph 62.

Eastern ǂkhû Bushman ⁻k'ǃ:dwa

A vine with many slender stems and bluish-green sessile leaves, deeply and irregularly lobed but usually less so than those of *Coccinia rehmannii*. The are covered with tiny raised scales on the upper surface, which sometimes show through on the lower surface as dots, and although hairs are present they are nearly all confined to the margins and too small to be seen by the naked eye. The tendrils are produced at the base of the leaves. Male and female flowers are borne on different plants. They are superficially alike, and similar to those of *Coccinia rehmannii*. The fruits are ovoid, three inches long and one in diameter, and are bright red when ripe. The leaves drop during the winter, and the vines also wither and disintegrate, but fresh ones arise in the spring from a perennial tuber weighing up to 25 pounds or so and similar in all respects to the tuber of *Coccinia rehmannii*.

Although the plant has a wide distribution on a variety of soils in the Cape Province, the Orange Free State, the Transvaal, the Bechuanaland Protectorate and South West Africa, it was not seen on the expedition until Nama Pan was reached, where it was growing under the shelter of trees in sand. Two tubers, which happened to be male and female respectively, were sent to Pretoria, and flowers and fruits were produced in the summer of 1955-56.

262 252 Both tuber and fruit are edible. The tuber, which is prepared by roasting or boiling, is fibrous and rather tasteless. The fruits may be eaten raw when ripe, and although sweet are without much flavour. They are best used for food when gathered green and cooked as a vegetable. Their texture is then fairly firm and their flavour like that of Asparagus. [136] An added advantage of using them green is that one avoids the larva of a certain fly which, in Pretoria at any rate, often heavily infests the more mature fruit.

114 X137 It is of interest to note that although there is a record in the National Herbarium that birds eat the fruit and that the tubers are dug out and eaten by buck, there is no record of the fact that the plant is eaten by human beings. On the contrary, the information on one specimen is "Fruit is very poisonous to children" and on another "Toxic".

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
GiKwe

114 language), and Kung; Simon, a mechanic's helper; William Camm, also an interpreter who spoke Afrikaans, some English, and Gikwe; and Gishe and Dabe, two Gikwe Bushmen who lived on Theunis's farm.

We were looking for Gikwe Bushmen, as we had heard that there were some who lived in the area. We hoped that if we found some, Gishe or Dabe might discover a relative and enable us to make friends.

133 We traveled for many days, all day long, for, not knowing 137 where the Bushmen were, we hoped to come across some of them somewhere, or find a trace or track that might show us in what direction they had gone. We did not find anyone, though, and we saw nothing but the series of long, broad plains that dipped and tilted ever so little; we would find ourselves down in a wide, shallow bowl of grass, then at the rim of the bowl, where we would see the next plain rolling for miles away. Occasionally we came to an acacia forest, but mostly the country was open grassland with tiny thorn bushes down in the grass to catch us. Because it was June, the beginning of the dry season, there were many veld fires, and although we never came upon any, every day we saw their smoke, gray and misty on the horizon, all around us in a ring.

136 Sometimes we saw a small herd of game running far away from us, raising a little cloud of dust. We saw gemsbok, handsome, large, beige antelope, striped black on their sides, white-bellied, with long, straight horns. We saw gray, tousled wildebeest with curved horns like the horns of cattle. Once we surprised a herd of three eland, a bull and his two wives, which had been eating behind a clump of bushes. They threw up their heads when they saw us, eyes catching the sun and shining pale green like fires. They wheeled, hoofs scraping, and ran, their red bodies swaying, their heads held high

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Gikwe

with their straight horns down on their backs; they neither leaped nor galloped, but paced majestically away, the great folds of flesh from their chins to their chests swinging. The bull left a string of saliva hanging, shining in the air. 136

Once we even saw a giraffe, but miles, miles away from us, alone under the clear sky among the thorn trees on the horizon, and we could see its silhouetted head and long neck turned to watch us; it seemed very lonely, very small, and very far away on the yellow flats; when the noise of our trucks reached it, it was frightened and began to run, heaving itself up and down. It ran away from us for a long time and got even smaller but never out of sight. At last it reached the horizon.

Later we came to some soft sand in a little forest of low trees, where we found the footprints of a family of lions. Beside the great, splayed pads of the lion, bigger than the span of my hand, went the smaller, neater pads of the lioness with little ridges of dust between the toes, followed by the tiny prints of two almost newborn cubs with feet no bigger than the print of my thumb. The marks had been made less than an hour ago, so John, Theunis, Gishe, and I, who had been in the jeep and were a good distance ahead of the heavier, slower trucks, decided to follow a little way after the family to see what they had been doing. It was during the day and warm, and the lions had been doing nothing except resting in the shade. We found the furry prints of the chests of the adults, made in the shade of a bush, and the prints of two more tiny cubs which the parents must have been carrying. We believed that they were near us because we heard some creature breathing in a tangle of bushes not far away, and we decided not to follow them because the lioness might become anxious and charge. We had only wanted to see them and perhaps photograph them, but we had no rifle and decided it was too

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kgalagadi FV4

B 136 dangerous for us there, so we withdrew. We should have loved to see them, and we were sorry to leave their patch of bush.

K 131 We looked in the open ground near the lions' thicket for 361 signs of Bushmen, but we found none, so we went on over the flat plains and the next day we came to a long dip in the country, forested with small trees, the last place, said Theunis, where anyone except Bushmen lived. It was the rainy-season K village of a few Bakalaharis, a Bantu people who years ago 221 lost all their cattle and went into the desert, where they live a life very much like the life of Bushmen except that they raise goats. During the rains they graze their goats at little posts of theirs, far away in the veld. We set off toward the village, planning to ask the people there if they knew of Bushmen K farther on, but as we went over the ridge and down into the 166 valley we came upon all the villagers walking toward us, driv- 484 ing donkeys and herds of goats, a surprising sight in that lonely country. There were about sixty people in all, tall, K [141 dark-skinned Bakalahari men carrying bows and arrows, fol- 482] lowed by their women, who carried heavy bundles on their backs, supported by tumplines around their foreheads, which made their eyes bulge and their lower jaws stick out. Among B [357 them walked their Bushman servants, old wrinkled men and [482 women, young girls with their babies, lithe young hunters, 854] small, light-skinned, all carrying great loads of household goods belonging to the Bakalaharis, with the youngest Bushman children riding on top of the loads. Some of the Bush- K [492 man boys were driving herds of goats, some of the older Bush- man women drove herds of scrubby gray donkeys which were also heavily loaded with bundles of hides, sticks used to build K houses, bags of belongings, and baby goats too young to walk. 484 We were surprised to see them and we stopped. Some of

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kgalagadi FV4

us over their slender shounders, neither smiling nor speaking, just watching with blank faces and great eyes.

We went on, and traveled for many days, breaking camp before dawn, stopping only for a minute for a bite at noon, not stopping again until it was almost dark. We saw no people, no animals, but only the miles and miles of yellow-silver grass and black bushes, and saw the wind that blew across the country twisting the grass from silver to gold, gold to silver. It may have blown for thousands of miles before it touched us, perhaps blown over a Bushman werf tucked away somewhere, one point in the enormous, vast veld that ran all the way to Molepolole and all the way to Ghanzi, hundreds of miles to the south and north to the great river; the veld was just grass, occasionally marked by a little nameless pan, a little salt flat, or a few bushes or thorn trees; it was inhabited only by lonely birds, a few antelope in small herds, a few families of lions, a few Bushmen, as far apart from each other as the stars. The only sound there was made by the wind in the grass or the voices of a few birds singing, the only movement the slow turning of the sun, the moon, and the cold stars, very far away.

Every morning the sun rose straight up from the flat horizon, salmon red and in a haze of yellow, distorted by the haze into an oblong, and always gigantic, like a monster looming above the poor, dry, stumpy bushes of the veld.

As we went farther and farther into the desert we saw less and less game. The great herds that had once been there were gone, perhaps because it was too dry, although the game antelope do not need to drink water, for they get enough moisture from the grass and roots they eat; perhaps because

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10

136 the great veld fires had burned away the dry grass farther in the north, causing new green grass to spring up, luring the antelope to come there. We saw fires very near us and we wondered if the Bushmen had followed the game to the north.

361 609 One day we came to a tiny, low forest where we decided to camp for the night. As we searched among the little trees for firewood, we came upon three scherms, three little huts, built by Bushmen and abandoned very recently. The ashes of the fires were still warm. The people who lived there had surely heard us and had run away, leaving many of their possessions behind. We found a pot, burned black from use, a few white beads, a quiver with arrows, and a digging-stick, which is a branch a few feet long with the bark peeled off and the twigs trimmed away, sharpened at one end and used by Bushmen as a spade to break the hard ground when they dig roots. We then found footprints made by the people when they had rushed off in all directions; and later, as we followed the tracks, we even found the prints of hands and knees where someone had crawled hastily across an open place.

411 412 415 301

609 The discovery of these huts made us very hopeful, as we had traveled much farther than we had expected. We felt confident that Gishe, who had been born near our very campsite, would be able to track the people and find them, or that they would be plagued by curiosity and finally visit us. They did not, however; nor did they come back for their possessions, nor was Gishe able to find them. He had been living on a farm for many years and was no longer an expert tracker; and after the night dew had fallen during the evening that we found the werf, the tracks were old.

Of course, it was useless for us to wander around the veld hoping to stumble upon fresh tracks, although we tried the following day without success. We also sent Gishe to look for

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10

CHAPTER THREE

The Bushmen

On the morning of the fifth day, when we felt that we could wait no longer, Gishe guessed that we might find Bushmen farther ahead, and we decided to try. Breaking a track is such a slow and tedious process that my brother John, Theunis, Gishe, and I loaded one truck and set off in it, leaving the other people to load the other trucks and follow later, traveling faster in our tracks.

136 We rode west all morning, and at noon we came to an open pan where fine, soft grass as fine as hair was blowing, and we saw a lion there, a big male with a black, tangled mane growing all the way down his neck and ending between his shoulders. He had the muscled neck and shoulders and the wide, swelling jaw of male creatures, and when he raised his head to look at us we saw that he was old. His face was wrinkled and massive, and he looked straight at us with a direct, indifferent look, the blind gaze of cats. His paws were enormous, his fur was the color of gold, He seemed so huge and bright in the sunlight, his eyes so cold and pale, that he fascinated us the way a cat fascinates birds. At that moment he could have walked up to us and carried one of us away.

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
GiKwe

Bushmen believe that certain famous sorcerers, once medicine men who chose to be poisoners and magicians instead of healers, have taken the form of certain lions, which can always be distinguished from ordinary lions by their great size and their ability to float in the air. Also, Bushmen say, the eclipses of the moon are caused by lions, as on very bright nights a lion may cover the moon's face with a great paw, giving himself darkness for better hunting.

Usually, when a lion sees you, he skulks away or bounds off in great, ungainly leaps, in clumsy dodges, making a fool of himself because he is frightened; but when one raises his head and looks right at you, then turns as this one did, and walks off without even looking back, you understand at once why Bushmen believe the things they do.

As the lion walked away into a thicket of acacia trees we climbed off the truck and followed him. It was rash of us, but we were not afraid of him. We wanted a photograph. However, he had disappeared, and as we were looking cautiously around among the trunks of little trees we heard a motor roaring, gears grinding; and finally, as we watched, the jeep arrived with Cass and Bob (Dr. Story), who told us to go back to camp as fast as we could. Two Bushmen had arrived.

We started back at once and got there late in the afternoon, and there we found them, two small men, one old, one young, in silhouette as they squatted by the fire, turning as we came to look at us, very nervous and very ill at ease. They had been given food and tobacco—a blue cloud hung above their heads—and a bucket of water, but during the course of the afternoon they had drunk the bucket dry. As Theunis and Gishe, the only people who could have spoken to both them and us, had been away, the rest of the expedition had had to wait anxiously for our return, unable to communicate a single word.

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
GiKwe

ing great carcasses of fallen trees, some with the leaves on the top still green, that were filling the air with the smell of their wood burning. The ground was still warm to walk on, but all the bushes, all the little succulents, all the vines that marked the water roots were gone; no snake or lizard or animal was there, all were burned or had gone; we saw only animal tracks half filled with ashes, and a few birds come to eat dead insects. We saw a pair of secretary birds and later a pair of paouw, huge gray birds that walk more than they fly, wandering through the ruins looking for dead reptiles.

As we walked, fine black powder rose to dust our legs, and now and then, off through the standing tree trunks and between the fallen trees' great upflung roots, little whirlwinds crossed back and forth, raising the dust in spiraled pillars. Bushmen say that whirlwinds show the presence of the spirits of the dead.

Witabe's eyes searched over the ground, and when he saw a small mound of earth he walked up to it and punctured it with his toe. Out rushed a horde of ants, which had been safe in their tunnels when the fire passed and now began at once to repair their damaged mound. Witabe crouched among them and began to pick and eat them, selecting the soldier ants, ones with large heads and heavy jaws. He bit off the abdomens, tossing the heads away. Presently he offered some to us, as I had feared he would; as everyone else ate one, I did also, and found that it was not too unpleasant but sour and very watery, very like a blackberry before it is ripe. The workers, I am told, are tasteless, but the fighters are considered a near-delicacy; mine opened her jaws wide to fight my thumb before I ate her.

Later in the day, when the sun in the sky, the still burning trees, and the fire-warmed sand made the air on the flats unbearably hot, we turned back to camp for the shade of our

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
GiKwe

CHAPTER FIVE

Gai and Ukwane

At our camp in Ai a ha'o I had a small tent not high enough to stand in, tied to a very small thorn tree. The tent was made of ragged, waterproof fabric which billowed in and out when the wind blew, and when lit from the inside by a candle at night looked luminous, pale green, like an aquarium or a lantern on the moon. The tent was a shade from the blazing sun at noon and a shelter from the wind, and through the thin canvas I could hear the creatures that passed at night—hares and small buck that made the long grass rustle, and occasionally small predatory animals, such as jackals, whose footsteps make a sound and which sometimes call "*tsa, tsa,*" their sad, loud cry that means in Gikwe "water, water."

Whenever an animal called, someone would surely answer it. People do this for fun, a hobby, answering every animal except the lion. In the Kalahari it is considered safer to let the lion have the last word.

I had luckily pitched my tent in the sun, and during the long cold period that followed our arrival at Ai a ha'o I was the only person who was warm because the tent kept out the

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
GiKwe

ered him entirely so that only his head and toes were showing, Tsetchwe in her small, ragged kaross which covered only her back, leaving her legs, belly, and shoulders bare. Near them sat Ukwane and Kutera, bundled up together in Ukwane's tattered kaross in front of a handful of embers on a small pile of white ash, Kutera having been too tired to gather much firewood the night before. Dasina sat by herself at another very small fire with the baby, stark naked, standing on her lap. He alone did not seem to mind the cold, for he smiled at us cheerfully when we came by. The others hardly looked up.

They had burned all their firewood the night before, and now it was too cold to go for more, or even to go for food, so they sat cold, hungry, thirsty, and even tired, since they had been too cold to sleep during the night. They were waiting, as they had waited all night, with infinite patience, infinite endurance, for noonday, when the sun would give a little warmth; but the sky was overcast, and even at noon the sun would still be far away.

Twikwe stood up to poke her fire and the Antarctic wind howled along the ground, blowing her little kaross back from her shoulders and leaving her naked except for her apron whipping around her legs, and her string of beads. The icy wind made the branches over her head rattle, made her breath blow back like smoke and her eyes stream with tears. She sat down again, downwind from the fire, wiped her eyes, and, wrapping her lanky arms around her legs, put her head on her knees and waited. It was six o'clock in the morning; they had six hours to go.

A little later I crossed the flat pan of Ai a ha'o to look for firewood in the plains on the opposite side. When I got there I saw a hawk in a tree, a hawk with a fine red beak and handsome gray feathers. He had gnarled, stalky legs and he

9: Thomas T-5 (1951-1955)1959
FX Bushmen FX10
GiKwe

136 stood on his branch with the legs wide apart, bracing himself against the wind. When I got near he dropped from his branch and let the wind carry him away, and I saw that he had been watching a colony of ground squirrels close by which had not seen him and did not see me. They, too, were miserable with the cold, for they walked around slowly as they looked for seeds to eat. I sat down to watch them, which they noticed, and some of them stood up to watch me. Their fur was oddly greenish and it blew in the wind showing little patches of white. They had long fat bellies, long heavy thighs, and little feet, and when they stood up they, too, kept their legs wide apart and braced. As they peered at me I heard on the wind almost inaudibly high, soft whistles, their cries of warning to each other. They decided I was dangerous and vanished down their holes.

123 I came back to the werf with some wood, which I gave to the Bushmen. They reached out their hands for it and put it on their fires, but they didn't say a word. Later, in our camp, we put all the wood we had on one great fire, where the Bushmen joined us and where we spent the morning making and drinking cocoa. We even put up a white canvas, and, lying between it and the fire, we were fairly warm.

423 621 602 159 Ukwane used that occasion to tell us something about his life and his relatives, his former wives, the children he had fathered and where they lived. Most of this centered around melon rights, or who could live in which areas, for if a person is born in a certain area he or she has a right to eat the melons that grow there and all the veld food. It is perhaps this factor that explains in part why the Gikwe bands are composed the way they are; a man may eat the melons wherever his wife can and wherever his father and mother could, so that every Bushman has in this way some kind of rights in many places. Gai, for example, ate melons at Ai a ha'o be-

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
GiKwe

281 skins with Bakalahari people for tobacco when we had gone and when the tobacco we had given him had all been used. We asked how much he would get and he measured an imaginary pile in the palm of his hand—not much for four or five days' work, although the skins of Delalandes foxes are quite small.

● 136 There were Delalandes foxes living not far from Ai a ha'o, a colony of them, for they always live together. I saw them often and they were charming creatures, fuzzy with huge ears and black stockings. I have always admired them, for although they have no defenses, can neither run fast nor fight, they are not afraid to go mousing far from their burrows. Then, when they are surprised by a menace, they have to run home, and they start off all together and run and run, humping on and on at an even pace, neither speeding nor slacking, until long after you first saw them they disappear into their holes. They are humble creatures, but persistent and brave. One member of our expedition hunted them for months with rifle and shotgun, trying to get a specimen for a museum in the United States, but I am glad to say he never succeeded. Ukwane caught them, though, the easy way. He set five snares for them at five mouse-runs in the grass; five foxes strangled in the snares, and Ukwane came around the following day to gather them up.

123 825 321 411 We filmed Ukwane working the skins. Then we found the shoulder blade of the gemsbok we had shot weeks ago still lying in the werf and we asked Gai to make an arrowhead out of it so we could film that, too. It was the right kind of bone, the kind that Bushmen use. The small antelope and even some of the larger ones, such as springbok and wildebeest, have bones which are too fragile to penetrate another antelope's heavy hide. Gai agreed to make the arrow; he broke off the scapular spine and pushed it into a fresh tsama melon to

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung
GiKwe

in a fold of his belly and held the finished end of the cord be- 283
tween his toes. Then, as he finished a section, he would pull with his toe, moving the cord into a new position while with his hand he removed a new tuft of fibers from his belly. It was very efficient. The cord almost finished itself. It seemed to me then that this use of a belly fold might once have given someone the idea of a vice or clamp, or the pulling foot the idea of a pedal.

The day turned out to be a very eventful one. In the after- 136
noon someone discovered that a large snake had occupied a hole right next to our camp. We all went to see the track, and found it so fresh and so enormous that we shook the Bushmen from their afternoon naps to tell us what we had found. Ukwane came alone, saying that he would know as well as anyone, and after looking at the track for a moment and following it out into the veld a way, he returned to say that the snake was still in the hole.

From the size of the track, which was as wide as the rut of a cartwheel, we could see for ourselves that the snake was about fourteen feet long, and from the straightness of the track, from the fact that it had no parallel scratches on its sides which would mark it as the track of a python, Ukwane could tell that it was made by a mamba, the deadliest snake in all Africa, second-deadliest in all the world, a snake that can travel almost as fast as a horse can run and whose poison will kill an adult human being in ten minutes or so.

The snake had come only that morning, perhaps attracted by a colony of bushy little rats that lived around our camp, and induced to move by the warm sun, which must have set his great length in motion out on the veld somewhere.

The members of our expedition felt that something should be done, so while my father brought a shotgun, Ledimo, the interpreter, lit a fire near the hole, then lit gasoline-soaked

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
GiKwe

●136 rags in the fire and pushed them burning into the back door of the burrow, hoping to drive the snake out the front. Nothing happened, and the tension naturally rose; and as the snake was fourteen feet long, everyone began to edge backward.

At that moment Gai arrived on the scene, still sleepy from his nap, balancing his spear over his shoulder. The sun shone on the blade. Gai walked through the circle of people straight up to the hole and, crouching, pushed the spear inside.

"What are you going to do?" we asked, and Gai looked back over his shoulder with eyes more black and cool and deadly even than the mamba.

"Eat him," he said.

But though Gai worked his spear in the front door of the burrow, then in the back door, for almost twenty minutes, he never felt the snake and we never saw it. Soon Gai gave up and walked away, disgusted and cheated of his meal, followed by Ukwane, and for the rest of the afternoon we avoided going near the hole. But in the evening, when we returned to inspect it, we found another wide track winding out into the veld. The snake, disturbed, had gone.

That night we all stayed close to our fires, in our circles of light, and kept out of the dark veld where the snake might be mousing, lying quiet in the grass where one of us might step on him.

Quite late that night, while we were still sitting quietly enjoying the warm air, we heard the growl of a large deep-throated creature right next to our camp, answered in a moment by the growl of a second creature very near the first. The growl rose into a sort of cry, higher and higher, and broke with a sighing, tentative note. It was a hyena crying to another hyena, a female and a male. The night air was moon-

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10

less, close and tropical, and their crying made a ghostly 136 ●
sound as they answered each other, two specters in the veld, their green eyes searching, and presently they were close together, growling now and panting, snapping their long teeth. They closed, each one's growls muffled in the other's dark fur, and we heard the male hyena's growling quiver as he shook the female, the sound of a dog worrying a bird. They were so occupied with each other that they did not notice or did not mind being very near our camp; if there had been a moon we could have seen them easily, but the sky was overcast and black. We heard their footsteps shuffle in the dry grass and presently we heard them move away. They must have gone in different directions, for one of them, a little later, called alone, was not answered, and called again; we heard the other calling finally, a hesitant, tentative crying, faint and far away.

On the way a moving shadow caught our attention, and we looked up to see a white-breasted, black-winged vulture sailing not far above our heads, not stirring himself but riding the drafts and currents of the air. He was looking at us with hard eyes, his red face turned to look down, and suddenly he closed his great wings under his body, sweeping them down so far that the long wing feathers brushed together four feet under his belly. Then his wings swept up again and bore him on. I had never seen a vulture do that before. He did it only once, then made a circle all around us, looking down at us, his eyes cool in their red wrinkles; he rose higher and higher and soon he was gone. All over Africa the sky is full of vultures, but so high that you can seldom see them; any time you look up with binoculars, however, you will probably be able to see one sailing, waiting up there for a disaster.

We were going particularly to look for *bi*, a fibrous, watery root that is the mainstay of the Bushmen's diet during the hot season when the melons are gone. From the end of August, when the spring begins, the heat increases in intensity until December and January, when the rains come, relieving the drought. During this hot, dry season the sand reflects the sun until the air all over the veld shudders and dances, until human beings and animals alike gasp for air and water. This is the hardest season of all for the Bushmen, yet most of them remain alive by going into the veld early in the morning in the cooler light of dawn to gather bi. The bi they find is brought back to the werf before the sun is hot; it is scraped, and the scrapings are squeezed dry. The people drink the juice they squeeze. Then they dig shallow pits like graves for themselves in the shade. They urinate on the bi scrapings and line the pits with the now moist pulp, then lie in the pits and spend the day letting the moisture evaporating from the urine preserve the moisture in their bodies. They lie still all day and at dusk go into the veld again to gather food, perhaps a few

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
GiKwe

CHAPTER SEVEN

Mood Songs

When we came to the pan of Ai a ha'o we found a small veld fire burning just at its edge on the opposite side and we noticed someone standing near it, partly obscured by the smoke. We called out to see who it was and a cracked voice answered: "Ukwane." He came over to us and told us he was looking for the piece of string that he had made which must have dropped out of his hunting-bag. He had been searching patiently over the ground all afternoon, but I did not see how he could hope to find it with all the smoke and with his hazy eyes that were almost blind. He decided to go home with us and fell in step beside us. We were hurrying because of the women's heavy loads and because of the fire, which by now was putting up a cloud of boiling, brown smoke that streaked out with the wind, making a long pathway above us that reached from the fire to the sun. Birds were being chased from
● 136 the bushes, still singing because they always sing in the afternoon, and insects from the grass.

578 We went past the fire and soon it crossed our track behind
621 us and went harmlessly into the west. As we walked, Ukwane
574 told us that during the afternoon the band of seventeen Bush-

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

into their scherms, and in the morning there was a lake of shining water on the pan and lilies growing everywhere, where only their dry leaves had been before.

After that the rain came often. Some weeks it rained a little every day, some weeks the rain became torrential and flattened the Bushmen's grass scherms, but it made the veld rich and green, with flowers everywhere and all kinds of fruit, which grew on trees and stalks and bushes. The pan became the home of shore birds, marabou storks and flamingos. Leopards and lions drank there, game antelope waded through it, leaving deep tracks in the mud, and the Bushman children sometimes danced in the shallows, their feet making flashing, rhythmic splashes, or bathed themselves until their skins were shining gold.

One night I went to the werf with a lantern and suddenly found myself beset by insects flying all around me, attracted by the light. It was the mating flight of white ants, which had come out of the ground in great numbers and now filled the air. The Bushman men were away on a hunting trip, unfortunately, but the women came to the light as quickly as the ants and began at once to catch them and stuff them into their mouths, saying "*gurico gum*" as they did so, *gurico* being the name of the ants and *gum* the word used for candy, for sweet gum that oozes from the trees, and for sweet caterpillars. Much faster than the women could eat, more and more ants came flying in a swarm as thick as a blizzard and already the ground was white with wings, for the ants, throwing themselves to the earth, would drop their wings instantly and begin to mate with each other in twos, in threes, even forming in great circles that turned as the ants ran scurrying to keep their positions, each one mounted with its forefeet on the back of the ant before it, pushed on by the ant behind. Sometimes an ant would fail to shed its wings and, finding

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

that the great trains dragging hampered its mating, would twist and thrash and struggle, squeezing the wings between its thorax and abdomen, which did break off the wings but left the stubs. More and more ants were flying to the light and their circles were growing bigger and bigger until we couldn't move without stepping on them, but the women, getting more excited and moving very quickly, as if responding to the pace and the excitement of the ants, scooped them up and ate them as fast as they landed, spitting out the silver wings as one would spit out chaff. Over our heads a few night birds and many bats were flying, catching and eating the ants before they reached the ground, and around our feet huge pink hunting-spiders rushed in and out of the swarm, dragging the ants from their acts of copulation and carrying them away to eat them in the dark.

Before long the flight had ended. Only a few late-coming ants bumped against the light, the night birds and bats were gone, and the spiders had run away. Nothing was left but the white wings like petals all over the ground and the wings that were caught in people's throats or stuck to their faces. The women, quite composed now, brushed themselves off, and one of them sang a song:

Gurico gum, ah
Ah, ah.

I noticed that each woman had managed to save a little bag or vegetable husk full of ants for her husband. These they put away.

That was in the late spring, a fertile season full of promise, and when it was over the best season of the year began, called the Veld Food Season, which starts some time in March. The big rains have ended, the air is warm but not hot, the veld is filled with water, game, fruit, roots, and

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

CHAPTER TEN

Beautiful Ungka and Lazy Kwi

For two days we drove our trucks through the scrub forests of Nyae Nyae and on the third day we came to a water pan not far from the village of Gam. In 1953 we had lived at Gam a short time; it was the cattle post of a very wealthy Chuana farmer. This farmer lived at Tsau, a large Bantu town several days' travel from Gam, but he had cattle posts with herders all through the country, keeping only fragments of his great herd at each one. Two Chuana families guarded his cattle at Gam. The village had once been the home of about a hundred Bushmen, but when the Chuanas had taken it, many of the Bushmen had been made serfs and they and their families now worked for the Chuanas, tending the herds.

The little pan near Gam was full of blue water, and was surrounded by yellow-leafed trees. We found two ostriches beside it. The ostriches stared mutely at us first, very wide between the eyes and square at the jaw, until it came to them that we were not ostriches; and with that they rushed headlong away, flapping their ostrich-feathered wings, working their naked thighs and knees like pistons, wildly out of control. They had an air of old people with tough, gray, varicose-veined legs, wearing nothing to hide their nakedness but lit-

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

136 tle feather boas around their waists, which were the wings.

As we left the pan a boar got up from the grass where he was lying and ran before us, a warthog with a heavy neck and red bristle of a mane, with curved tusks and with his tail stiff up in the air like a banner, trotting like a horse. He held his head high and ran away proudly, and he was old and very massive for a pig.

Not long after that we saw the two thatched rooftops of the village of Gam. A feather of smoke was rising over the rooftops, and soon we were there.

648 609 The people must have heard our trucks. A small crowd was standing in the bushes, the people watching apprehensively as we came up. Mostly they were Bushmen, naked and smooth and brown, but here and there we saw a Bushman man wearing a ragged shirt or a woman in an old, filthy dress. In the crowd, towering over the Bushmen, were the Chuanas, a woman and a man, the woman dressed in a turban and a long dress, the man in shorts and a jacket. These two were the cattle-keepers. When our trucks stopped, the woman recognized us and, clapping her hands together, ran forward to meet us, followed at once by several Bushmen who also recognized us, and after that the crowd broke and all ran forward, the tense looks of apprehension gone, for if all the Bushmen had not known us they had heard of us and knew who we were. In a moment we found ourselves in the center of the crowd as all the Bushmen who knew us threw their gentle arms around us, touching us so lightly that it was like being embraced by moths. All those who did not know us crowded to look at our faces, and everyone talked at once until our ears rang. The Chuana couple, both more reserved, held back until the others had greeted us and then came forward to shake our hands.

621 When the excitement had died a little and everyone had a

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

with his possessions—bowls, fire sticks with which the Bushmen kindle fires, skins, and little bags of food.

Just before we left, the Chuana woman came to say good-by and I gave her some tea and a bottle of perfume that was given to me when I left America. My mother gave her a silk scarf and some bars of scented soap, and the woman, overwhelmed, sat down on the ground with these things in her lap and with the aid of the interpreter she started to thank us, but then she said: "Too much thanks is like a curse. I sit here with my delights."

After that we climbed on the trucks and drove away, looking back to see the sky of evening and the dry hills around Gam, and the Chuana woman still sitting on the ground waving to us. In back of her, a group of serf Bushman women were thoughtfully carrying away the firewood we had left behind.

Many miles from Gam we camped for the night and all the sky in the west was hazy red with the flat-topped thorn trees blue below it, and suddenly through the haze a herd of giraffes ran from a thicket near us into the open plain. There were nine giraffes and eight were females, all strung out in a line with their strong legs slowly opening, then bunching as they ran and their heads on their long necks stretching out and back, out and back. Behind the females ran the bull, an enormous creature half again as tall as they were, half again as broad, mighty and ponderous as he reached his long legs forward to overtake his wives.

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

It used to be that no one lived at Nama Pan, although there was a deep waterhole brimming with water always, even when the lake was gone, and fruit in the bushes around the shore, and plenty of game. It had been an empty and unwholesome paradise abandoned in the veld at the time I once visited it with a band of hunters and women who went there in search of food. It was just before the heavy rains, when all the veld was blooming, and the hunters picked the sweet gum that oozed from the trees with the tips of their spears. The women gathered karu plants, little green fruits that look like cucumbers hanging on vines like grape vines, and that day one of the children saw a ratel, a honey badger, which the hunters speared. This was the badger that no one would eat but Lazy Kwi, the one that made him vomit. At that time the pan itself was empty of water and the dark, rank grass was growing where the water now stood. As we approached the pan a crowd of vultures moved in the grass, ran clumsily toward us, and launched themselves into the air. They heaved their great wings and rose higher and higher and soon a column of vultures hung above the pan, the highest ones almost invisible, the strong wings of the near ones beating the air just over our heads. A shower of feces came spattering down.

When the vultures saw that we were staying they flew gradually higher and higher until they were lost in the air and we walked over the dark grass tampled flat by them toward the waterhole which stood in the center of the pan. On the way we found a vulture egg among the droppings, small and pink and newly laid, for it was covered with a thin coat of slime, as though it had slipped out of a vulture accidentally when she was frightened and hurrying to fly.

A stench hung over the pan which got stronger as we neared the waterhole, a dark cavern in the grass. The stench

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

133 136 was coming from it, and though the adult Bushmen knew what to expect and didn't waste time investigating, only pausing for a moment at the brink to glance inside, then going on, the children stopped to gaze and I stopped with them. The sides of the well overhung the water in a lip about four feet high. The water itself was the color of clay, and on its smooth surface a hairy back and a pair of pointed ears were floating, the back and ears of a drowned hyena floating on its belly with its nose pointing straight to the bottom. White maggots crept from one ear to the other and the rotting smell rose from the corpse. Obviously, the hyena had been thirsty and when trying to drink had fallen in and drowned. A little boy who was watching the hyena, fascinated, began to howl faintly, "Mmm//ao, mmm//ao," the way a hyena howls, but putting a click in it the way Bushmen usually do, and then for my benefit acted the scene as it must have taken place. He rolled out his tongue and edged his hand toward the lip of the well, then jerked away, staring at the water with yearning eyes and saying: "No, I can't reach it. Yes, I must." He edged his hand toward the lip again, then shrieked "Ai! Ai!", waved his arms, pawed the air as the hyena had pawed the sides of the well, twisted his head from side to side, eyes starting, then closed his eyes and let his head roll back, his face calm and his lips parted, turning his hands limply, palms up. "Finished," he said.

"Yes," I said. "Too bad."

[262] "Oh, hyenas are worthless animals," he said. He meant that they were not good to eat. Then he ran off and after a short time came back with a long stick, which he pushed into the water. "Help me stir," he said, so I did, and presently the carcasses of two wild dogs and a vulture bobbed to the surface, rolled over slowly, legs in the air, and sank again. "You see?" he said triumphantly. "Many things die here."

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

shallow well between two rocks and hidden in a thicket, but we saw no sign of goats or people, only the tracks of wild animals around the waterhole and down a lonely little path that led there, and we wondered what had happened to the goats and Toma. Perhaps he had become a renegade, hiding from the Bantus, on the run with his family; perhaps he now was wearing a goatskin and cracking the bones of his charges out in the veld somewhere.

On the eastern horizon we saw the smoke of a veld fire which Lazy Kwi said might have been lit by Toma and we drove toward it and reached it just before the sun went down. We found a way through the wall of flames and found what we thought was the source of the fire, but the burned area was very large and it was hard to be sure. It was almost dark then, very cold, and when we came to a clump of bushes we stopped the jeep and walked about, gathering dead wood that lay near by. The camp was on a rise and we could see about for miles. In the north rose the brown backs of the Aha Mountains, and on the other side the land fell away, down and down, until all the trees were obscured, then beyond that until the horizon looked like the sea, just a blue line, darker and a little hazier than the sky.

It was very quiet and lonely there except for a few birds that flew high and far above us calling, and we called Toma's name again and again and our voices rang in the cold air, but we did not get an answer. Lazy Kwi, naked and barefoot in the frost, walked over the plain with his arms hugged against his chest for warmth and called more: "Toma . . . *Toma*," a little annoyed as he was tired, then waited, called again: "Toma . . . my brother . . . brother . . ." and as his voice died away no answer came; but a koorhan, a dark bird the size of a chicken, flew out of a clump of bushes far away and rose cackling up to the sky, where we saw it, black and clumsy, before it dropped to the earth again.

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

That night it was so cold that no one wanted to leave the fire and when finally everyone was at my camp, settled close to each other, side by side, with their bellies warmed by the heat and their shoulders covered by their capes, their backs turned against the enormous veld where the cold wind blew and where the dark was coming, they began to entertain themselves with conversation, their favorite pastime.

The adults held their elbows on their raised knees and cupped their hands under their chins to cast little shadows into their eyes, for in this way they could see clearly over the bright fire. Close to the fire even the children were not cold. The older children sat up like the adults, although they were naked and the adults had capes, and the younger children slept in their parents' arms, warm between the fire and their parents' skin.

Before the darkness had come totally I left the fire to look through the little forest for wood, and as soon as I was off among the trees a way I was quite alone; I could not see the firelight and the voices did not reach me, and as I walked around in the frost and the gloom I could hear my footsteps crackling the grass. When I stopped walking to pick up an icy stick I could still hear the grass crackling, and when I looked around I saw, not too far away, a pair of mongooses, a male and a female, with five little ones. They were eating seeds from the pods of a plant and when they saw me they ran, all in an orderly line, and when they were gone the forest seemed very empty, for I could see through the trees to the desolate plains beyond, and up through the branches to the sky, where stars were showing, far away. A partridge rose in front of me—I had chased it from its bed. I could hear it calling as it flew, lost out in the veld now, and when I had a bundle of sticks I found my way home.

Dikai had been out for sticks in the opposite direction and

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

137 It was noon when we reached the tree; we broke through the bushes that surrounded it and came into its clearing, a circle thirty yards across of stony, barren ground from which the long roots had sucked the nourishment, and in the middle of the circle the great tree rose, pink-skinned and mighty, the claimer of two lives, twenty feet in diameter and almost two hundred feet high. Its lower branches were heavy and enormous, but the branches got smaller toward the top, the upper ones very thin, crisscrossing each other like lace. On the eastern face of the tree there were no branches; the pink 137 481 trunk towered up and up, smooth and bare. On this side was an ascending row of pegs driven in by Bushmen long ago who had been after honey, used in later years by Bushmen hunters trying to rob the hives again or to scan the countryside for game. The pegs led from the ground around the trunk to the lowest branch, then up the trunk again to the next branch, ending finally at the top of the great tree, almost out of sight.

I knew this old tree very well, for during the year that we had lived at Gautscha we had camped beside it. It had been the home of many creatures then; and now the eastern face of the tree, the great bare slab rising like pink stone, was pocked with little holes. Some of them were empty, surely, but some had tufts of dry grass showing in the openings, little creatures' nests, and here and there, between the roots or in the forks of branches, were the caves of larger animals.

224 136 Bees had lived in a hole among the branches halfway up, though Toma said the bees had now moved higher; a mongoose had lived in a little cave between the roots on the south side, though now the mongoose was dead, snared and killed by Toma's son; a python that had lived in a hole on the north side was also dead, killed and eaten by an old Bushman woman we had known; but a colony of green-furred squirrels that had lived on the lowest branches, we saw, were

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

still there. Bushmen do not eat squirrels because squirrels have no meat on their bones. Birds of all kinds lived in the great tree too, and there was a hawk's nest in the upper branches; I once had seen the two gray hawks that built it, but now they too were gone.

It was the bees that interested the Bushmen, though, and those of us who had come from Nama—Toma, Gao Feet, Crooked Kwi, Lazy Kwi, my brother, and I—sat among the rocks at the foot of the tree, the men planning what they would do. I was so tired from having been awake all night to watch the dance that I lay down on the stones and fell asleep, and when I awoke, in an hour or so, the men had built a fire but were still arguing about who would brave getting stung to find the honey. No one really wanted to do it; but I saw that Crooked Kwi was almost persuaded, being very amenable and the youngest person there. Sure enough, taking a smoldering brand in his teeth, he at last began to climb the pegs, clinging to them with his fingers and toes. Toma followed at a distance, cautiously, urging Crooked Kwi on, and the two climbed higher slowly, Crooked Kwi looking down from time to time to be encouraged. When he did, Gao Feet and Lazy Kwi would shout for him to continue. At last Crooked Kwi reached the branch beside the hive and squatted there, blowing on his brand to make it smoke while Toma climbed past him, around to another branch, where he, too, squatted with his feet apart and his hands on his knees exactly as though his feet were on the ground, the branch was so wide.

Crooked Kwi found the hole, a small opening, though even from the ground we could see a few bees humming idly outside, and blew the smoke from his brand into it, then, encouraged by Toma, reached his slender arm inside to find a honeycomb. He was stung, of course, and snapped his arm out instantly, though even then the bees were not angry, None

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

pointed to me and said: "Look at Dikai. She wants to go home. Let's go home." And so we did, and as evening came we went by Gautscha Pan.

We had not seen it before; we had been in the bushes on its eastern side when we had looked for honey, but now, as we emerged from the bushes, we found ourselves on its farther, eastern rim.

Great Gautscha Pan was full of water, shining gray water. Smoke overcast the evening sky all around the horizon and high into the air, and all we could see was the great stretch of gray water with yellow grass like islands in it and flocks of small black ducks breaking its surface, and yellow grass all around. The line of bush on the horizon was gray-green near us where we stood on the rock slide at the eastern rim, touched with yellow spots, acacia trees with their soft, pale-yellow fuzzy flowers round as balls, looking like clouds, like dreams, pretty and fresh with a sweet fragrance, and as the bush went around the pan the haze dimmed it, giving it the subtlest colors and a wild, still look like trees before a storm. Among the bushes to the north of us rose the two visible baobab tops, eerie and far away, and in the water the yellow grass was reflected upside down.

There it was, Toma's great country, magnificent and solitary, for no one lived there now, no person, no animal, except the black wild ducks that swam on the water, some near, some far away, in lines of three or four, in pairs, moving gradually in their even, deliberate processions as though they were being drawn slowly over the water by hidden streams.

The sun was sinking; high above the horizon it was deep red, a perfect circle, almost hidden by the haze and reflected by a red path in the water, and as it sank into haze that grew thicker and thicker the sun got paler and more obscured until it vanished long before it set.

11:Marshall E-5 (1950-1955) 1958
FX10 Bushmen FX10
Kung

132 gin to tower in the afternoons. They wear over the desert from the east and are usually gone by morning. But should they encounter the right conditions, the local rains that fall from these clouds—the "little rains"—bring the spring of the year. This is the sudden season of thunderstorms. The storms are like gods walking in the desert, each attending to a narrow path with violence and rain. In the quiet, after their passing, many plants bloom—small flowers and edible greens.

● [136] SPRING is also the season of heat. Myriads of flies, the year's crop, now hatch. The heat increases toward

11:Marshall E-5 (1950-1955) 1958
FX10 Bushmen FX10
Kung

174 last, white and black met,—raiding one another for cattle across the Fish River—and the time of the Zulu and the Voortrekker was near, the classic period of the Bushmen was over.

131 THE AREA called *Nyae Nyae* lies on the border between South West Africa and Bechuanaland. It covers about 10,000 square miles, between 18°55′ and 21°0′ South latitude and 19°50′ to 21°25′ East longitude. In 133 the center of this area is a ring of *kalk* pans. *Nyae Nyae* is actually the name the !Kung gave to this ring of pans, although I have applied it to the whole area occupied by the !Kung nation.

● 136 There is game round these pans and, in small groups, everywhere in *Nyae Nyae*. Wild roots grow in the 137 bush that shrouds much of the territory. There is *tsi* in the south, while 133 *mangetti* forests crowd along the crests of white sand dunes in the south and east, and spread over the north. Their

15: Marshall E-5 (1951-1961) 1965
FX10 Bushmen FX10
!Kung

meat to the owners of the territory should they happen to encounter them, but this is a gift, not an obligatory tribute. The vastness and emptiness of the country allow this freedom in hunting rights and the wandering nature of the game requires that the hunters, if they are to succeed at all, be free to look for game wherever they can find it.

The !Kung eagerly pick up tortoises, certain kinds of lizards, snakes, ostrich eggs, and grasshoppers, and they relish termites when these insects swarm out in nuptial flight. These items provide incidental delicacies and gathering them is like the gathering of veldkos. The person who gathers them may keep them for himself and his own family. Men gladly shoot small animals and birds if they happen upon them—wart hogs, duikers, other small antelope, porcupines, badgers, pythons, spring hares, ostriches, paouws, guinea fowl, red-winged partridges, occasional migrating geese, and other birds. They may keep them for their own families. They do not, however, devote their hunting time to the smaller animal creatures if they find fresh spoor of the larger ones. Hunting the big game animals that feed a whole band is the work of a man's prime and is incumbent on him.

Hunting parties usually consist of from two to four or five men. A man cannot hunt effectively alone in this country. Several parties hunting in different directions are more advantageous than one larger party. Any man may organize a hunting party, with relatives and friends from his own band or from neighboring bands—men he likes to hunt with. No one is formally a leader; the men talk and plan together and are likely to fall in with the suggestions of the one whom they consider the best hunter. Participation in any given hunting party is voluntary. What !Kung society urges is that the hunters hunt; it does not restrict the ways and means. The force of public opinion upon men not to sit in the werf, not to be lazy but to do their share, is tremendous.

The game the !Kung hunt deliberately and purposefully are the several big antelopes found in the region: eland, kudu, gemsbok, wildebeest, hartebeest, springbok. They also hunt the more rarely seen buffalo and occasionally manage to shoot a giraffe. Although there is this considerable variety of kind, there is not a great abundance of game. The herds are small and the hunts long and hard.[6] The antelope, because they can go for long periods without drinking, move and drift about anywhere in the vast monotonous veld and are very difficult to find. Hunters often search for days, covering scores of miles, before finding spoor fresh enough to follow, and they may follow it for days before catching up with the animal. Their little arrows kill by poison rather than by piercing deeply, and, when an animal is shot, if it is big, it may wander for three or four more days until it dies of the poison. Smaller animals succumb in a shorter time. The hunters must track the animal and find it before the lions, leopards, hyenas, jackals, or vultures devour it.

15: Marshall E-5 (1951-1961) 1965
FX10 Bushmen FX10
!Kung

513 882 together may sleep near the parents of one of them, but not exactly at the parents' fire.

855 857 Within the frame of protectiveness the parents are very permissive and make few, if any, demands on their children. With no houses and few utensils, there are not many household tasks to assign. Children are not sent off alone to do any of the daily work of fetching water or wood or [136] gathering veldkos. Although lions, leopards, and hyenas tend to mind their own business, they are present in the country and share the water holes with the Bushmen. Poisonous snakes are a very real danger. Furthermore, as the hunters say, it takes a lifetime to learn the country well enough not to be easily lost in the featureless grass and brush. The adults do not let their children out of their sight. In their parents' presence the children imitate adult activities in vital, active play, very engaging to watch, and [868] participate in actual work as they are able. The adults pause to show them how to hold a digging stick, or a toy bow or drill, so that play and learning merge.

524 857 [512] The !Kung have a rich variety of lively group games, with pantomime, singing, dancing, and other rhythmic movements, that children and adults together enjoy playing in the werf when the heat of the day is over. In most of their games boys and girls play separately, but they dance and sing together.

861 !Kung children are never harshly punished. One father said that if he had a boy who was quarrelsome or who disobeyed the rules—for instance, the absolute rule of the !Kung against stealing food or possessions—what he would do about it would be to keep the boy right with him until he learned 857 sense. The children on their part do not often do things that call forth 156 punishment. They usually fall in with group life and do what is expected of them without apparent uncertainty, frustration, or fear; and expressions of resistance or hostility toward their parents, the group, or each other are very much the exception.

881 [173] PUBERTY • When the fathers of the present old men were young men, the Nyae Nyae !Kung adopted the ceremony of the *Choma*, which they said was taught to them by a !Kung man who had married into another [171] language group in the south. The *Choma* resembles some Bantu initiation [562] ceremonies at certain points. The men who have had the ceremony and are therefore *Choma* owners take the boys to a place far enough from the werf to be out of hearing of the women, who, the !Kung claim, would die if they [535] heard some of the *Choma* sounds. The men and boys dance all night for several nights to special *Choma* songs with special rhythms that differ from [534] those of the other dances. A secret bull-roarer plays a part in the ceremony. [302] At the end the boys are scarified with a vertical line down the middle of [304] their foreheads and are given a special *Choma* haircut. Circumcision or other genital operations are not practiced by the !Kung.

133 for plotting territorial divisions, group movements, and seasonal subsistence patterns.

Fauna

136 The main fact to be noted here is the comparative scarcity of migratory large game. There is evidence for a diminution in the abundance and variety of large game over the last seventy years. There are reports that the hunter Van Zyl killed elephant and rhinoceros at /gam, 60 miles south of Dobe in the 1870's. Some Bechuana informants found rhino at /ai/ai around 1915. /ai/ai is 25 miles south of Dobe. Today elephants are only occasional summer visitors in the Dobe area (two came in 1963, none in 1964). There are no rhino within 200 miles of Dobe. Springbok were present as late as 1950 (J. Marshall 1957) but they are absent today.

Ungulates: In terms of biomass the most abundant ungulates are kudu, wildebeeste, and gemsbok in that order. Kudu were observed in groups of 3-7 in all seasons. On one occasion a herd of twenty was seen. Wildebeeste occurred in all seasons in groups never larger than eight. This is in sharp contrast to the situation 200 miles south of Dobe where herds of several hundred are common. Gemsbok were sighted singly or in pairs in all seasons.

The most common antelopes numerically were the two non-

• 136 migratory species, steenbok and duiker. These were by far the most frequent Bushman kills during the study period. Wart hog were very common and frequently killed. In terms of diet this is the most important mammal.

None of the other large ungulates were common or were factors in Bushman diet. Those recorded are listed below.

zebra - one sight record (group of 4), never hunted by Bushmen.

giraffe - one sight record (group of 5), three killed by Hereros with rifles, none hunted by Bushmen.

buffalo - one sight record (a single animal), a summer visitor. In some years they are said to migrate in numbers from the swamps. This migration did not occur in 1963 or 1964.

eland - no sight record; said to be present, none killed in recent years.

roan antelope - one sight record (a single animal), no record of kills. The sable antelope which is so common east of the swamps is entirely absent on the west (Reay Smithers, personal communication).

red hartebeeste - three sight records, evidence of several being killed in recent years.

springbok - present until 1950, absent today.

impala - one pair of horns found; said to be very rare.

Carnivores: Paradoxically all of the major southern African carnivores are represented in the Dobe area although

• 136 none of the larger ones are common. There were sight records or specimens for the following species. Those killed by Bushmen are marked by an asterisk.

lion	leopard
*cheetah	spotted hyena
brown hyena	wild dog
*caracul	wild cat
*genet	*slender mongoose
banded mongoose	*zorilla(striped polecat)
*ratel(honey badger)	*aardwolf
*black backed jackal	*bat-eared fox

The other larger mammals present were:

*ant bear - common, burrows found everywhere, one of the more frequent Bushman kills

*pangolin-(scaly anteater) present but not common

*porcupine-common, killed frequently

*springhare-very common, important item of diet

Of the small mammals, only four have been positively identified:

*common hare	galago
ground squirrel	tree squirrel

No bats or rodent species were positively identified. There is a Smithsonian collecting team in the field in 1965, making the first systematic collection of mammals in the Dobe area.

136 Finally there are three peripheral species that are resident on the edges of the area.

vervet - common at Tsodilo, not observed in the Dobe area

baboon - common on the Okavango River, said to penetrate the desert, not observed

serval - reported to be present, not seen.

136 262 Of these 40 odd species only ten were observed to be regularly hunted and eaten by the Bushmen. These are ranked in order of dietary importance.

1. wart hog
2. kudu
3. duiker
4. steenbok
5. gemsbok
6. wildebeeste
7. spring hare
8. porcupine
9. ant bear
10. hare

136 Birds: Seventy-five species were recorded during the study. These were identified with the aid of Roberts (1957) and Smithers (1964). The most common resident species are listed here. Very common species are marked by an asterisk.

*ostrich	secretary bird
*yellow billed kite	martial eagle
red-billed francolin	Swainson's francolin
*crowned guinea fowl	kori bustard
*crowned plover	*blacksmith plover

• 136

double-banded sandgrouse	cape turtle dove
Meyer's parrot	*grey loerie
lilac-breasted roller	*grey hornbill
yellow-billed hornbill	cardinal woodpecker
*fork-tailed drongo	penduline tit
*pied babbler	yellow-bellied bush warbler
Marico flycatcher	crimson-breasted shrike
*long-tailed shrike	white-browed sparrow weaver

The common summer migrants recorded were:

hammerkop	white-bellied stork
red-billed teal	white-faced duck
European swallow	

[262] Bird meat and eggs are not an important item of diet among the Dobe Bushmen. Only eight species were observed to be eaten:

red-billed francolin	Swainson's francolin
crowned guinea fowl	kori bustard
red-crested korhaan	double-banded sandgrouse
cape turtle dove	red-billed teal

Curiously, ostrich are not hunted for meat. They are tracked, [415] however, in order to find the nests. The eggshells are used as canteens for water.

Reptiles and Amphibians: Nine different species of snakes were seen. Only four could be identified taxonomically.

• 136 Poisonous:

1. black mamba
2. horned adder
3. puff adder
4. not identified
5. not identified

Non-poisonous:

6. rock python
7. not identified
8. not identified
9. not identified

Four species of the turtle family were recorded:

1. large leopard tortoise, Geochelone sp.
2. small leopard tortoise
3. not identified
4. not identified

Two species of chameleon:

1. Rhampholeon sp.
2. not identified

Seven species of lizard:

1. striped skink, Mabuyu sp.
2. Zygodactylus sp.
3. striped plate lizard, Gerrhosaurus sp.
4. marbled gecko, Pachydactylus sp.
5. land leguaan, Varanus sp.
6. not identified
7. not identified

136 Two species of frog:

1. Pyxiecephalus adspersus
2. Rana anchietae

[262] Of these twenty-four species, five were recorded as eaten:

1. rock python
2. large leopard tortoise
3. small leopard tortoise
4. land leguaan
5. the bullfrog Pyxiecephalus

[126] Invertebrates: Only a small percentage of the countless insects and other invertebrates present at Dobe were collected. One box of specimens was lost in the mail. Other identifications are pending. Below are listed thirteen species of invertebrates and a further sixty-nine species of insects.

Class Arachnida	Scorpions 2 spp.
	Spiders 3 spp.
	Ticks 2 spp.
Class Myriapoda	Centipede 1 sp.
	Millipede 1 sp.
Class Hirudinea	Leech 1 sp.
Class Unionidae	Freshwater clam 1 sp.
Class Helicidae	Land snails 2 spp.
Class Insecta	
Order Dictyoptera	
	Cockroach 1 sp.

136

Mantises 3 spp.

Order Phasmida

Walking sticks 2 spp.

Order Saltatoria

Grasshoppers 7 spp.

Cricket 1 sp.

Order Odontata

Dragonflies 2 spp.

Order Isoptera

Termites 4 spp.

Order Hemiptera - Heteroptera

Shield bug 1 sp.

Aphid 1 sp.

Order Neuroptera

Antlions 3 spp.

Order Lepidoptera

Butterflies 3 spp.

Moths 12 spp.

Order Diptera

Mosquito 1 sp.

Flies 6 spp.

Order Hymenoptera

Ants 2 spp.

Bee 2 spp.

Wasps 3 spp.

136 Order Coleoptera

Blister beetles 2 spp.

Click beetles 6 spp.

Dung beetle 3 spp.

Poisonous beetles 2 spp.

Other beetles 2 spp.

136
262 Insects do not play an important role in the diet. One species of antlion (determination pending) had an annual outbreak around the end of November. Tens of thousands pupate within a 36 hour period and the Bushmen eat them by the hundreds. In 1963, the outbreak occurred on November, 24, in 1964, on December 3.

Three different species of click beetle were eaten in March, 1964. These were considered a delicacy rather than a staple. The Bushmen said that certain grasshoppers and caterpillars were edible but they were not observed to eat them.

262
237 Honey is considered by all authors to be a major Bushman food (Bodenheimer 1951). It is curious therefore that it was rarely observed to be collected or eaten.

136
278 By far the most important insects for subsistence are the two[1] species of beetle used by the Bushmen for poisoning

---

[1]Possibly as many as eight species of poison grub are used by the !Kung Bushmen! Koch (1958) collected five new species that the !Kung said were used for poisoning arrows. (See Shaw et al., 1963).

136
298 arrows: Diamphidia nigro-ornata and Polycada flexuosa. These are described in Chapter VI.

Climate

132
[133] The Kalahari Desert has a mean elevation of 3,000 feet above sea level and lies within the summer rainfall area of Southern Africa. These factors contribute to a climatic regime that is characterized by hot summers with a three to four month rainy season, and by moderate to cool winters without rainfall.

132
805 Five seasons may be distinguished in the Dobe area. Most Bushmen recognize five (although some divide the year into eight or more seasons) and their scheme will be followed here.

Seasons

1. !huma (spring rains) -- The Bushman year begins in October or November with the onset of the first rains. These consist of light convectional thundershowers that often fall on one area and miss other areas entirely. The first rains have the effect of triggering growth and reproduction in the flora and fauna and may overnight transform the landscape from a parched and dry state to one of lush greenery.

2. bara (main summer rains) -- These rains fall from December to March and coincide with the season of plentiful food. There is a wide variation from year to year in the

16: Lee E-5 (1963-1965) 1966 FX10 Bushmen FX10
!Kung

V. SUBSISTENCE ECOLOGY: AN OVERVIEW OF PLANT AND ANIMAL RESOURCES

121 The concept of a hunting and gathering way of life has assumed a misleading connotation in the ethnographic literature. The term has come to imply a random precarious existence searching for food, an eking out of subsistence [433] of odds and ends. Since the present study is the first detailed analysis of the food habits of non-agricultural people, it should be stated at once that the Bushman subsistence is based on a systematic strategy of exploiting abundant food 222 resources. Very little of their food gathering is left to chance. Their knowledge of the local environment, of the habits of game and the growth phases of food plants is virtually exhaustive. In other words, the Bushmen know where the food is at each season of the year and they arrange their schedule of activities to take maximum advantage of these resources. They do not allow themselves to get into difficult situations, and even during the season of scarcity they have available several alternative strategies of getting food and water.

262 The security of their life is in part due to the fact 137 that the basis of their subsistance is plant foods which are • 136 abundant, local and predictable. Meat is of secondary importance in the Bushman diet. Game animals, by contrast to

262 plants, are scarce and unpredictable and people never depend
137 on meat for their basic subsistance. Therefore the well-
136 being of the Bushmen as a population can be viewed as the
433 product of two factors: the abundance of food resources in their environment, and the intelligence and sophistication which informs their exploitation of these resources.

512 Although the getting of food is the major activity of
433 Bushman life and is a major focus of Bushman thought, the greater part of the waking life of the Bushmen is given over to social, religious and trading activities that are largely independent of the food quest.

Their emphasis on non-subsistence activities becomes clear when daily records are kept of the activities of the [126] members of a camp. For example, a diary of activities was kept for the Dobe camp during July, 1964. This record was made during mid-winter, a season of comparative scarcity. It [462] was found that the 23 adults of this camp spent less than half of their days in subsistence activities, an average of 23% of the time for the women and 40% of the time for the [574] men. The majority of their waking hours were spent visiting [521] other camps, entertaining visitors, resting, talking, hut building, and making tools, clothing, and ornaments.

Plant Resources

137 There are well over 200 species of plants and 220 species
136

137
136 of animals named and known by the Dobe area Bushmen. Of
[126] these 420 species, 350 species were collected and identified
433 by the author. Two-thirds of the plant species and half of
824 the animal species are utilized by the Bushmen. Of these,
825 they classify 85 species of plants and 54 species of animals as edible. It is therefore evident that the Bushmen have a remarkably broad subsistence base. On closer examination, however, one finds that the Bushmen are highly selective in their food habits. In fact, only nine species of plants constituted about three-quarters of the total vegetable diet; and one species alone, the mongongo nut, accounted for at least half of the total. Furthermore, of the 54 animal species eaten, only 17 species were consistently hunted.

824 A plant species may be regarded by the Bushmen as a
262 major food for one or more of several reasons. Certain foods are prized because of their abundance or because of the long season during which they are available. Other foods are prized because of the ease with which they are collected. For this reason fruits are generally more popular than roots since the latter have to be dug out of the ground. Then there are foods which are especially good tasting and/or believed to be highly nutritious. The various plant foods are evaluated pragmatically and rationally and few species
825 are restricted by magico-religious taboos. This is in sharp
262

222
262 dimension in which the gatherers move farther and farther in order to eat the desirable foods, and a hierarchical dimension in which people remain in one area and eat their way through classes of species of decreasing desirability.

• 136 Animal Resources

The 223 known species of animals in the Dobe area are divided taxonomically as follows:

mammals	42 spp.
birds	75 spp.
reptiles and amphibians	24 spp.
invertebrates	82 spp.
TOTAL	223 spp.

262 Mammals - The mammals represent the highest percentage of
825 animal biomass in the Dobe area and it is not surprising that the meat of mammals accounts for over 90% of the animal diet of the Bushmen. In all, 29 of the 42 mammal species are known to be eaten by the Bushmen and only seven mammal species are universally tabooed as food.

Personal, age specific, and sex specific taboos play an important role in the eating of mammals. No individual Bushman will eat all of the 29 eaten species and no two individuals have the same set of tabooed species. Each person has his own prescription of what species he may and may not eat. The mammals can be divided into seven degrees of taboos.

311 area of each territory.

[312] Second, the area and shape of an individual territory is
[824] influenced by the distance between the important resources within it, such as water sources and mongongo nut forests. It is these point resources and not the spaces between them that are the significant features of the landscape.

Third, territories overlap each other and there is disagreement as to the ownership of these overlapping areas. Most Bushmen say that these areas are owned by all, which means, in effect, that they are owned by no one.

Each of these features will be discussed in detail.

1. Hinterland - It was mentioned earlier that the Dobe area
[312] was surrounded by a belt of uninhabited country. Except for a few summer months there is no standing water in this belt and, as a consequence, the Dobe area people rarely bother to hunt and gather within it. This outer belt is not lacking
[136] in food resources, however. Surveys of the country by Land-
[137] Rover indicate that the game and plant foods there are even more abundant than they are within the traditional territories. Why then are these resources so infrequently utilized?

311 The answer lies in the fact that the Bushmen can usually
312 satisfy their annual subsistence requirements within a radius
361 of 15-20 miles from their permanent waterholes. Whenever possible the Bushmen prefer to make their camp sites at

16: Lee E-5 (1963-1965) 1966 FX10 Bushmen FX10
!Kung

221
312
361 The distribution of camps during the summer follows two phases. In the early phase when water is standing in a dozen or more localities camps are found at most waters. This is the time of maximum freedom of movement because ponds fill up in the usually waterless belts and make it possible for people to visit relatives 35-70 miles away.

The distribution of camps in December 1963 is illustrated in Map 17, p.157.

The second phase of summer life begins as these smaller waters dry up in February and March. Then most of the Bushmen converge on the large summer waters such as !Gauŝa Pan (not to be confused with /Gauŝa Pan in the Nyae Nyae area).

!Gauŝa Pan in its peak season (Jan-March in 1964) was a pond 400 feet long and 125 feet across, located in a local [162] drainage area between two dunes. In addition to a resident [648] population of 40 Bushmen (augmented by dozens of temporary visitors) the pan supported four Bantu cattle posts with [136] about 500 head of cattle. The pan was a watering place for kudu and wildebeeste and had resident flocks of red-billed teal, white-bellied stork and hammerkops. Within a 3 mile radius of the pan there were remains of at least ten abandoned Bushmen camps that had been occupied in previous years.

[162] Besides !Gauŝa there were four other big pans in the Dobe area, each of which supported large Bushmen camps (of

[TEXT CONTINUED ON PAGE 158]

222 their water was exhausted. Water could only be carried out
312 in sufficient quantities to support a family for two or three nights, so that at noon of the third or fourth day, a family was forced to return home.

312 The ability of a group to live away from a waterhole is strictly limited by its capacity for hauling water. The ostrich egg shell has an average capacity of 36 ounces (U.S.).[1] The contents of two eggs (72 ounces or 2-1/4 quarts U.S.) supplies the minimum daily fluid requirements of one adult. Bushmen informants consistently spoke of two eggs-ful as their minimum daily ration. When well-water was available, the Bushmen were observed to drink more than 72 ounces per day. Irven DeVore made a four-day study of the water intake of a group of 15 people in November, 1964. During this period he provided (from water drums) all the water that was drunk by a party of 15, including seven adults and eight children.

His observations are set out below:

1. Total water given out during a 72 hour period; 2,812 oz.
2. Average per 24 hour period; 937 oz.

---

[136] [1] The Kalahari ostrich egg shell is smaller than that of other areas. The mean capacity of four eggs from the Dobe area is 35.8 ounces (U.S.). (The range of capacities is 33.5, 35. 35.5, and 39.5 ounces.) This compares with an egg from the Cape Province with a capacity of 42 ounces, and an egg from Kenya with a capacity of 46 ounces.

2: Schapera E-4, 5 (no date) 1930
FX13 Hottentot FX13
Bushmen FX10

a most desolate appearance. Verdure is entirely wanting, the numerous gullies are empty, and the low ranges of ironstone koppies which dot the plains seem to reflect the heat as from a mirror. The vegetation is composed very largely of drought-resisting thorn bushes, succulents, bulbous and tuberous plants. Grasses appear only in exceptionally wet years, while trees are usually absent, except along the dry river-courses and on the mountain slopes in the east, where the rainfall is highest. Till the early years of the nineteenth century the Great Karroo was regarded as a desert unfit for man or beast; since then well-sinking and donkey transport have bettered the conditions, and the region has gradually become occupied.

Fauna

The great variety of habitat provided by the country taken as a whole has naturally favoured the development of a varied and abundant fauna.[1] South Africa has long been renowned for the wealth of its larger forms of animal life, although with the advance of European settlement and colonization the numbers have been rapidly reduced, particularly of certain classes of big game. The native inhabitants had certainly done something to reduce the numbers and affect the distribution of the fauna, but a balance had been reached which still left the country richly stocked. The Cape was full of game when the first European settlers established themselves there 250 years ago, and in their gradual spread inland the white men found the same abundance of fine forms of animal life in each new tract of country that they entered. A few decades were enough to convert each newly-opened district from a hunter's paradise into a stock-farming country, and the increase of veld-burning carried the destruction into other zones of life. But over large parts of South Africa the face of the country itself has been little changed on the whole, and a good deal of the original fauna has survived, even on much of the enclosed land.

The mammalian fauna is, or rather was, characterized by the great abundance and variety of antelopes, the presence of such remarkable "living fossils" as the elephant, giraffe, rhinoceros, hippopotamus, and aardvark, as well as of the buffalo, zebra, and quagga, and the abundance of carnivora, large and small. During the eighteenth

[1] An excellent short account is given by Dr. E. L. Gill, "Descriptive Sketch of the Fauna of South Africa," *Official Year Book of the Union*, No. 9, pp. 31–41. Cf. also Passarge, op. cit., pp. 78–86.

2: Schapera E-4, 5 (no date) 1930
FX13 Hottentot FX13
Bushman FX10

and nineteenth centuries many of the larger game animals were driven out of the more southern regions, the quagga being totally exterminated, but most of them are still found in the Kalahari and northern parts of South-West Africa, as well as in the eastern lowlands (from Zululand to the Zambesi delta).

The kudu is the most common of the larger antelopes, the duiker and steenbok among the smaller antelopes still numerous over the whole country, while in the north and east herds of hartebeest, blue wildebeest, gemsbok, and eland are also found in fair numbers. Among the better-known antelopes peculiar to South Africa are the bontebok and the black wildebeest, both now surviving only in a state of semi-captivity on farms, and the springbok, still fairly plentiful in some districts and kept in small herds on many farms. It formerly inhabited in immense numbers the open treeless plains of all South Africa, and is celebrated for the vast " treks " in which it travelled in search of food or water. Small herds of elephant survive in a few strongholds to the east and south, and in parts of the Northern Kalahari. The zebra, giraffe, buffalo, and rhinoceros are still found in the northern parts of South-West Africa and the Kalahari, as well as in the eastern lowlands, while the hippopotamus, formerly abundant in every river of the Cape, is now confined to the neighbourhood of the Orange River, and also occurs in the rivers of the Kalahari and the Low Veld of the east. Of carnivorous animals the leopard is still common in many mountainous regions over the whole country, as are also the wild cat, red lynx, spotted hyena, and jackal, but the lion, once so plentiful throughout the Cape Province, is now apparently extinct south of the Vaal and Orange Rivers. Baboons are numerous in many mountainous districts, and the forests, even along the south coast, still shelter monkeys.

Birds especially prominent in South Africa include the starlings, the weaver-birds, the larks, the sunbirds, the shrikes, bulbuls, and swallows. Of game birds the most common are the ostrich, still existing in the wild state in various unenclosed parts of the country, though now chiefly known as a domesticated bird; the bustards (korhaans and paauws), the francolins or African partridges, guinea-fowl, sand grouse, quail, and snipe, as well as numerous varieties of waterfowl. The secretary bird (*Serpentarius*), a long-legged terrestrial relative of the hawks and eagles, is protected on the strength of its reputation as a snake killer. A tropical element, comprising such birds as parrots, louries, hornbills, rollers, and glossy starlings, penetrates

2: Schapera E-4, 5 (no date) 1930
FX13 Hottentot FX13
Bushmen FX 10.

H B 136

into Damaraland on the west, and on the east by way of the Transvaal bushveld and Natal to the south coast regions of Knysna and George. From the south it is naturally only sea birds that can be contributed to the fauna; the petrel family forms the characteristic element from this quarter, comprising a number of small petrels and whale birds, the "Cape pigeon" and "Cape hen", shearwaters and several albatrosses. The jackass penguin, breeding in immense numbers on the small islands off the south and west coasts, represents a truly antarctic contribution.

The reptilian fauna is particularly abundant, lizards and snakes especially being very numerous in many parts of the country. Of the latter, the cobra (genus *Naia*), the puffadder (*Bitis arietans*), and the ringhals (*Serpedon haemachates*) are among the more formidable poisonous representatives; the mamba (*Dendrasdis angusticeps*), most deadly of all, is found principally in the eastern parts of the country. The crocodile is extinct in the Cape Province and the Orange Free State, but is still found in the rivers of the eastern lowlands and the Northern Kalahari. The Arachidna are notable for the abundance of scorpions, and among the spiders for the large number of ground-dwelling forms living in burrows, with or without trapdoors, beneath stones, or as free-living hunting forms.

The insect fauna as a whole presents an extraordinarily large number of species, many of them extremely abundant. Locusts are conspicuous among the common plagues of the country, and from time to time issue in devastating swarms from their breeding grounds in the Kalahari and other more or less inaccessible dry regions. Bees, wasps, and ants are very richly represented; ants' eggs and the honey of wild bees provide the Bushmen with an important element of their diet. Mosquitoes and horse-flies are rarely very troublesome except in the moister parts of the country; the anophelene mosquito conveys malaria in the northern parts of South-West Africa and the Kalahari, as well as in the Low Veld of the east, while the tsetse fly (*Glossina*) carries cattle disease (nagana) in the Ngami country and a few localities to the east, but no case of sleeping-sickness has been known to occur. The widely-distributed termites are often destructive, but provide many animals and birds with their chief subsistence. Butterflies and moths, beetles and bugs all appear in numerous varieties, and one species of beetle, *Cladocera nigro-ornata*, forms the most potent ingredient in the arrow-poison of the Kalahari Bushmen.

B [262]
B [164]
B [411]

2: Schapera E-4, 5 (no date) 1930
FX13 Hottentot
Bushmen FX 10.

joint is usually removed during childhood, and the custom appears to be associated with some magical belief. One of Miss Lloyd's informants stated that the joint is cut off with a reed before the child sucks at all, and that the motive underlying the custom is that the child should live to grow up.[1] Other writers add that the operation is performed only on a child whose predecessor has died young, and is intended to protect it from a similar fate.[2] Various other interpretations have been given of the custom, but the one just mentioned appears to be the most probable. This form of mutilation does not seem to occur to any extent in the Northern tribes. Seiner found it in a few persons among the Kung, but states that it was exceptional,[3] and there is no other record of its occurrence in these tribes.

Barrow further mentions that in a large band of Bushmen seen by him in the midlands of the Cape all the men had a small piece of wood or porcupine quill inserted through the perforated septum of the nose.[4] This practice is not reported definitely by any of the other writers on the Southern Bushmen, although it is hinted at by Bleek and Lloyd.[5] Hahn, however, speaks of it as occurring in a Bushman tribe in the South-West Kalahari, whom he therefore names "Nasenstockträger",[6] and recently Pöch has published the photograph of a woman from the waterhole/kang in the Southern Kalahari, in which it is seen very clearly.[7]

In the majority of Northern Bushmen at the present time, and especially in the North-Western tribes, the most widespread form of mutilation is scarification, which was quite unknown among the tribes south of the Molopo.[8] Small cuts about an inch long are made in the skin, and ash black or other colouring matter is rubbed into the wounds, producing a slight but noticeable scar. In the women they are said to be made mostly for ornament only, on the face, thighs, and buttocks, but among the !O Kung of Angola they are also made in connection with the puberty ceremony for girls. In the men some of the cuts may also be purely ornamental, but many of them are definitely related to social and hunting observances. Thus all Naron, Auen, and Kung have a vertical cut or cuts between the eyebrows,

[1] Lloyd, *Bushman Material Collected*, p. 17.
[2] Arbousset, loc. cit.; Thompson, loc. cit.
[3] "Bereisung der Omaheke," 290
[4] Op. cit., vol. i, 276.
[5] *Bushman Folklore*, 329.
[6] "Die Buschmänner," 66.
[7] "Ergebnisse meiner Kalahari-Reisen," pl. v, fig. 2.
[8] Passarge, *Die Buschmänner*, 101, 108–9; Kaufmann, "Die Auin," 141–2; Werner, "Ueber die Heikum- und Kungbuschleute," 245–6; D. F. Bleek, "Buschmänner von Angola," 51; *idem*, *The Naron*, 10–11.

2: Schapera E-4, 5 (no date) 1930
FX13 Hottentot
Bushmen FX10

mixture of animal and vegetable poisons, the ingredients most frequently employed being snake poison and amaryllis juice (*Haemanthus toxicarius*); while most of the Kalahari tribes derive their arrow poison from the grub or chrysalis of the *Cladocera* beetle. 278 [184]

The method of preparing the second type of poison is to cut off the head of the snake, extract the poison sacs, dry them and pound them into a dust. This is then placed in a piece of ostrich egg-shell or the breastbone of an ostrich, and the vegetable juice being poured in the mixture is stirred with a piece of bone or stick. It is then boiled until it acquires the requisite degree of consistency, usually that of a thick jelly, brownish-red in colour. Where a purely vegetable substance is used, as in the case of the *Acokanthera* shrub, the method of preparation differs but slightly. The wood of the shrub is pounded into rough powder, which is put into a clay pot and boiled for some time. A lid is kept on, as the fumes are noxious, but the liquid is stirred occasionally. After a while the wood is taken out and the remainder allowed to simmer until it is reduced to a cupful of glutinous liquid. This is then taken to a *Euphorbia* tree, and mixed with the fresh milky sap drawn from its stem. The poison, a brownish substance similar in appearance to beeswax, is now ready for use. It is generally worked up into a lump, which when not wanted immediately is carried about, wrapped up in a bit of skin, in the long bag which every Bushman has. When the poison is required, the lump is heated in a bit of tortoise-shell, and the melted portion either smeared on the arrow-head with a brush of wood or bone, or else, as was the custom with the Cape Bushmen, placed in a "poison stone", a smooth flat pebble with a deep groove down the middle. The part of the arrow to be anointed is pressed down upon this and worked round and round until the poison coating has acquired the proper shape. If possible the poison is never touched with the fingers, and great care is taken that none adheres to the hands or nails during the process.

The insect *Cladocera nigro-ornata* which forms the main ingredient in the arrow poison of the Kalahari Bushmen is a small reddish-brown beetle which in early spring frequents certain bushes (*Commiphora dinteri Engl.*), and hatches its eggs on the branches. The grubs come out in summer, eat the leaves of the bushes and crawl into the sand beneath them, where they form cocoons. "In both these stages they are used as poison, but the cocoon is preferred. It is dried in the sun and can then be kept for some time and is easily [136]

2: Schapera E-4, 5 (no date) 1930
FX13 Hottentot
Bushmen FX10

224 soon as the dog has gripped his prey." Among the Naron these dogs are procured from BeChwana, Bergdama or white men in order [231] [439] to hunt jackals, leopards, lynxes and other animals whose skins are valued for making karosses. The skins so obtained are brought to the giver of the dog and bought by him at his own price for tobacco or trade goods, chiefly the former. The dogs are sometimes used by the people to catch hares and small buck for their larder, but are never taken out to hunt larger game.

In addition to these different methods of hunting by pursuit and the use of weapons, the Bushmen employ various methods of trapping. Pitfalls are often made during the dry season in the path to a waterhole or along river banks, and covered with bushes. In the Central and Northern Kalahari these pits are about four yards long and deep, and not quite a yard wide. They are dug with the ordinary digging-stick in such a way that a small wall of earth is left standing in the middle, but not reaching to the surface. Large animals in attempting to escape out of the pit jump on to this partition wall, where they remain hopelessly suspended on their belly. Other pits of the same nature, especially among the Southern Bushmen, often have pointed stakes placed in the middle. They serve to catch big game animals, such as rhinoceros, which are then killed with the spear, and in particular those, like zebras and antelopes, which come down in herds to drink at the water. In former times, when there was a far greater abundance [136] of game, whole valleys were sometimes enclosed, and large numbers of men combined to drive a herd of game down from the heights into the trap in the valley. Galton describes one of the most remarkable works of this kind. "We passed a magnificent set of pitfalls which the Bushmen who live about these hills had made. The whole breadth of the valley was staked and bushed across. At intervals the fence was broken, and there broken deep pitfalls were made. [313] The strength and size of timber that was used gave me a great idea of Bushman industry, for every tree had to be burned down and carried away from the hills, and yet the scale of the undertaking would have excited astonishment in far more civilized nations. When a herd of animals was seen among the hills, the Bushmen drove them through this valley up to the fence; this was too high for them to jump, so that they were obliged to make for the gaps, and there they tumbled into the pitfalls."[1]

[1] *Narrative of an Explorer in Tropical South Africa*, 106; cf. Wikar, "Berigt aan den ... Heer van Plettenberg," 88–9; Burchell, *Travels in S. Africa*, I, 386–7; Chapman, op. cit., ii, 80–1; Passarge, "Das Okawangosumpfland und seine Bewohner," 693; *idem*, *Die Buschmänner*, 78–9.

2: Schapera E-4, 5 (no date)1930
FX13 Hottentot
Bushmen FX10

224 returning to the camp, sleep under the central tree and avoid sexual intercourse with his wife, lest the poison prove ineffective and the animal escape. The meat of an animal killed by a dog may not be [841] eaten by women or by any men whose wives are menstruating; this is to prevent bad luck befalling the dog in the pursuit of game. Any want of success is generally attributed to some chance accident; for example, a man who has had bad luck in hunting while his wife was menstruating will not hunt again while she is in that condition, nor will she eat any of the *!noe-di* at such times.[1]

These practices and beliefs obviously represent only a small portion of what must be an elaborate series of usages relating to hunting, but they suffice to indicate how the Bushmen, fully aware of the uncertainty attendant upon their efforts, seek to relieve their apprehensions and to obtain confidence by the aid of magic and taboo.

Collecting

224 Hunting in the old days was unquestionably the principal source
● 136 of subsistence in Bushman life. But with the decrease of the game
648 in their region and with the enforcement against them of the game
222 laws framed by the white man, its importance is diminishing, and at the present time the Bushmen depend very largely for the means of existence on the wild vegetable foods growing in the veld.

[241] Agriculture in any form is altogether unknown to them in their
222 traditional mode of life. The nearest they have got to it is found
224 in the practice observed by the North-Western tribes of burning the
311 veld at the end of the dry season.[2] This, it is said, is done primarily in order that the edible bulbs, roots, etc., should come up better during the approaching rainy season. It is also used, however, as a means of hunting, for the men spread round the fire in a semicircle and drive all the game rushing from it before them in a certain direction where some hunters are lying in wait; moreover, the new grass growing soon after the burning attracts the game, which returns to the area, and thus makes it good hunting ground. Incidentally the burning serves to kill off snakes, scorpions, and other noxious creatures. Men may only [423] burn in their own territory; to do so across the border, or to gather wood where others have burned, is a great offence. In former times, [622] among the Naron, the chiefs are said to have regulated the burning;

[1] Fourie, "Customs of the Hei-//om," 56; *idem*, "Bushmen of S.W. Africa," 102.
[2] Jodtka, "Reise nach dem Okavango," *D. KolBl.*, xiii (1902), 491; Kaufmann, "Die Auin," 147, 156; D. F. Bleek, *Naron*, 17.

8: Dapper Q-4 (no date) 1933
FX13 Hottentot
Bushmen FX10

000 Men heeft by hen wilde paerden en muil-ezels, die beide zo schoon uit de natuur in 't wilt voorttelen, dat geen schilder de kunst by hem heeft, om die met alle hare verruwen na 't leven af te tekenen. De paerden hebben billen buiten gewoon geappelt, en zijn overal buiten de billen, zoo wel onder als boven, gestreept met geel, zwart, root, en zuiver hemels blaeu. Desgelijks zijn de muil-ezels mede gestreept, maer niet geappelt, met wit en kastanje-bruin, buiten gemeen schoon.

De *Sonquas* braghten des jaers zestien hondert en twee-en-zestigh een huit van een dezer beesten aen de kaep van goeder hope, die d'onzen van hen ruilden, tegen tabak en andere dingen, en te pronk, met hoi opgevult, als iets raers en ongemeens, gelijk het ook is, op de voor-zael van het Fort ophingen, om van het volk der aenkomende schepen bezichticht te worden.

Het dassen-vlees verstrekt den *Sonquas* een aengename spijze, daer by, en by zekere worteltjes, die in d'aerde wassen, zy voornamelijk leven. Zy houden ook zeer vele jacht-honden, die op de dasse-jacht wel zijn afgerecht, en de dassen uit de holen weten te slepen, 't welk hun meeste spijze is.

Het zijn ongemene grote rovers en stropers; want zy stelen van andere Hottentots al het vee, dat zy kunnen krijgen, en vluchten daer mee aenstonts in het geberghte, zonder van iemant, zelf van geen andere Hottentots, in die schuilhoeken en verhole gaten te kunnen gevonden worden.

Hunne huizen, slechts van takken te gader gevlochten, zonder gebreide matten, en alleenlijk met biezen overdekt, zijn ettelijke duizent in getale, naerdien zy van d'eene in d'andere trekken, en nooit die opbreken, maer op gelegene plaetzen noch al meer andere opzetten.

Hun mantelkens zijn gemaekt van t'zamen genaide vellen der wilde ossen, die zich op de klippen onthouden. De vrouwen hebben voor de hitte en het branden der stekende zonne-stralen, een *quitazol*, of zonne-scherm van struis-veren, aen en om het hooft vast gemaekt.

• 136 [39]) Dr. W. J. Leyds, quoted by Godée-Molsbergen (*Reizen in Zuid-Afrika*, i, 47 n.), suggests that the "horses" were zebras and the "mules" quaggas, which seems consistent enough with the description.

[40]) On Nov. 8, 1660, the Sonquas "brought in 2 or 3 stuffed heads, which were extraordinarily beautifully striped, but with ears as long as those of asses. The rest of the head is exactly, as regards head and mouth, that of a horse" (D., *ut. cit.*). In the entry for Dec. 14, 1660, it is said that "one of our people . . .

8: Dapper Q-4 (no date) 1933
FX13 Hottentot
Bushmen FX10

big game, especially wild horses and mules. There are in those parts wild horses and mules, both so beautifully bred out by nature that no painter is skilful enough to paint them true to life with all their colouring. The horses have buttocks extraordinarily dappled, and over the rest of the body are striped yellow, black, red and pure sky blue. The mules are also striped, white and chestnut brown, but not dappled, and are uncommonly beautiful.[39]) The Sonquas in 1662 brought the skin of one of these beasts to the Cape, which our countrymen bartered from them for tobacco and other things. It was then filled with straw and hung up for show in the hall of the Fort, as something curious and uncommon, which it also is, to be seen by the people of the incoming ships.[40])

The meat of the rock-rabbits constitutes a pleasant food for the Sonquas, who live principally on it and on certain roots growing in the ground. They also keep many hunting dogs,[40a]) trained to hunt the rock-rabbits which are their principal food, and knowing how to drag these animals out of their holes.

They are extremely great plunderers and marauders. They steal from other Hottentots all the cattle they can get, with which they then flee immediately to the mountains, where they cannot be found in their retreats and hidden caves by anybody, not even by other Hottentots.

Their huts, made only of branches twined together, without woven mats, and covered solely with rushes, are several thousand in number; for they move about from one place to another, and never break up the huts, but erect still others wherever they camp.

Their little cloaks are sewn together from the skins of the wild oxen which live on the rocks. The women have a *quitazol* or sunshade of ostrich feathers, tied on and about the head, to protect themselves from the heat and burning of the sun's piercing rays.

---

had shot a wild horse below the mane in the neck. This horse was very beautifully gray dappled over its whole body, except behind from the back over the buttocks and along the legs which were flame-coloured, with white, sky blue and reddish brown stripes, wonderfully beautiful . . . It had small ears like a horse. The stuffed heads and pieces of skin which the Hottentots sometimes brought to us belong evidently to another sort, as they have long ears, though extraordinarily, curiously and beautifully flame-coloured in white and chestnut brown."

[40a]) Dogs were the only domestic animals kept by the Bushmen. They were generally lean, hungry-looking mongrels, half starved and savage tempered, but excellent assistants in the chase, for which they were mainly employed.